THE PRACTICAL
JUNIOR TEACHER

EGYPT

This P. & O. liner "Strathaird" (22,500 tons) is primarily carrying passengers on a Mediterranean cruise, but such ships take also a certain amount of cargo and bring back to Britain from Egypt some of the finest quality of cotton.

THE PRACTICAL JUNIOR TEACHER

A Guide to the Most Modern Methods of Teaching Children in the Junior Schools

Edited by F. F. POTTER, C.B.E., M.A., B.Sc.

*Lately Director of Education for the County of Cheshire; formerly H M Inspector of Schools
Author of "Common-sense English," "Common-sense Arithmetic," etc*

Associate Editor: G. M. PLACE

*Contributions by Leading Authorities in Every Branch of Junior Education,
with Numerous Illustrations, Schemes of Work, and Practical Suggestions*

VOLUME V

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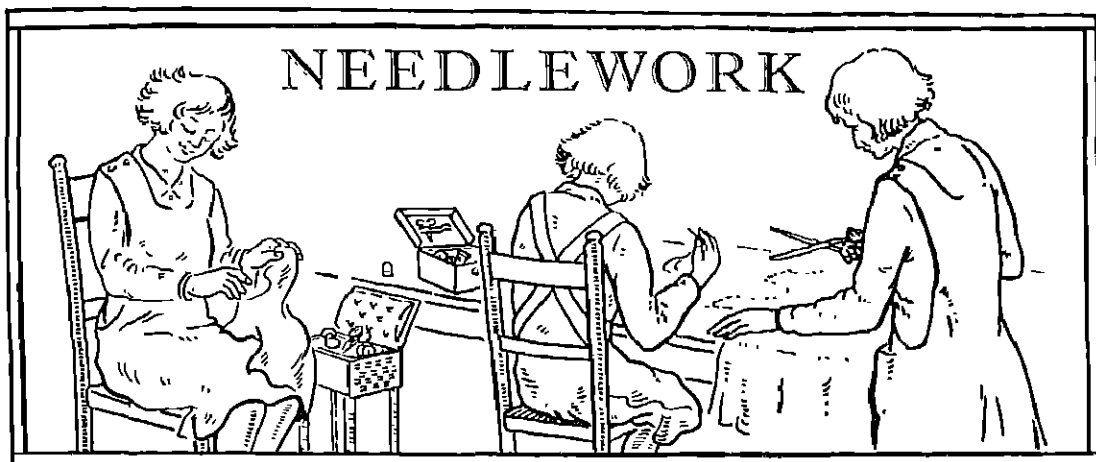
MATERIALS AND ACCESSORIES

MATERIALS AS THEY GROW

1. Cotton

THE hairy seeds of the cotton plant may be compared with those of the dandelion, but the seed is about as large as a pea, and the number of hairs is correspondingly greater, so that the ripe seed is surrounded with a fluffy mass of fibres. The cotton plant is a cone-shaped bush, usually about 3 ft to 6 ft. high. It flourishes in sub-tropical countries with an ample supply of water, but where natural rainfall is inadequate irrigation makes cotton cultivation possible. Some of the finest cotton in the world is grown under irrigation in Egypt and the Sudan—indeed the quality of Egyptian cotton is surpassed only by that of the West Indian cotton. The chief cotton-producing areas include the United States, India, China, the West Indies, Peru, Egypt, and the Sudan.

2. Silk

Silk is obtained by unwinding the cocoon spun by the caterpillar of the silk moth. This caterpillar is commonly called the silkworm, and when it reaches the chrysalis stage it produces a fine silk thread which it distributes about its body in regular figure-eight windings until about 4,000 yd of fibre are present in the form of an oval cocoon. Three to twenty of these cocoon threads are twisted together to make a suitable thread for weaving silk fabrics. The silk indus-try originated in China and still flourishes there, but Japan has now taken the lead in silk produc-tion. The industry depends very largely on the successful cultivation of the mulberry trees upon the leaves of which the caterpillars feed vora-ciously. India and many of the South European countries produce a certain amount of silk but cannot be compared with China and Japan.

3. Wool

Wool consists of the fibres obtained from sheep by removing the whole of the fleece. Very little difference exists between wool and hair, but wool is more curly and, because of its rougher surface, possesses the power of matting together to form a dense felt. The raw wool is sorted into different grades according to its length of staple or fibre, fineness, strength, lustre, and felting properties. After sorting the wool is washed to remove all dirt, before it passes on to be combed and have the fibres straightened out. The wool passes through many other processes before it is ready to be woven into fabric. Yorkshire is the centre of the British woollen industry, i.e. the production of woollen goods, but much of the wool is imported from Australia, New Zealand, and South Africa. The chief sheep-rearing countries are Australia, the Argentine, U S A, South Africa, the United Kingdom, New Zealand, and India

COTTON MATERIALS

Name of Material	Average Width	Kind of Material
	(Inches)	
Calico	36	A strong material suitable for household articles.
Longcloth	36 36	A bleached material suitable for underwear.
Lawn	40	A fabric obtainable in all shades, suitable for dainty garments.
Cambric	36	A very fine material produced in delicate shades suitable for exquisite lingerie
Tobralco	6	A cotton material produced in all colours and an attractive range of designs, suitable for children's garments, holiday dress, and overalls
Horrockses dress fabric	36	A cotton material with a linen finish Obtainable in all colours, and suitable for children's frocks, overalls, and household articles.
Hercules	36	A material recommended for strength and durability Suitable for children's dresses, overalls, and household articles It may be obtained in a variety of shades.
Flannelette	36 36	A material with a fluffy surface Suitable for night wear
Winceyette	36	A cotton material produced to resemble a woollen fabric, used for underwear and night wear.
Cretonne	36	A printed material suitable for making workbags, overalls, covering boxes, and book covers
Gingham	36	A material usually produced in check designs. A hard wearing fabric suitable for children's wear, holiday dresses, and overalls.
Voile	36	A fine material with an open weave Suitable for making summer dresses
Organdie	36-50	A very dainty fabric for making collars, cuffs, jabots and party frocks
Painted organdie		
Cotton crash	17 36	A strong material suitable for aprons and household articles, and for embroidery

MERCERIZED MATERIALS

Mercerized cotton is cotton treated by a chemical process invented by John Mercer This process creates a sheen on the cotton, thus likening it to silk

Name of Material	Average Width	Kind of Material
	(Inches)	
Mercerized lawn	36	A soft cotton material with a silky appearance. Suitable for fancy dress costumes
Sateen	28	A material with a silky finish used for lining garments
Spuriva	20-30	An ideal lingerie material with silk-like finish
Tricoline	38	A strong material suitable for blouses, dresses, and shirts
Printed poplin	36	A strong material suitable for blouses, dresses, and shirts.
Printed cambric	36	A very fine material suitable for children's frocks

FIG. 1. *Cotton Picking in The Sudan*

WOOL MATERIALS

Name of Material	Average Width	Kind of Material
	(Inches)	
Wincey	30–36	A soft woolly material used for night wear
Flannel	30	A soft material suitable for making baby garments.
Crêpe flannel	36	A soft material produced in dainty shades suitable for underwear and night wear
Dayella	31–36	A soft material produced in an attractive range of plain shades, stripes, and designs, suitable for underwear, night wear, dresses, and jumper suits
Ripple flannel	42	A soft material with a rippled surface, used for making dressing gowns.
Wool *crêpe de Chine*	36–51	A soft material used for making dresses
Serge	50–51	A woollen material with a twill This is a very hard-wearing material, and is suitable for making gym tunics and kilted skirts.

SILK MATERIALS

Name of Material	Average Width	Kind of Material
	(Inches)	
Crêpe de Chine	36	A fine quality of silk material which can be obtained in all shades. Suitable for making into underwear and dresses
Spun silk	30–36	A very soft silk material with an even weave Suitable for making underwear and gym blouses
Shantung silk	30 36	A silk material usually produced in a natural shade This kind of silk is a very good wearing fabric, and is suitable for making children's garments and underwear
Japanese silk	36	This silk is made in different weights according to quality
Taffeta silk	36	A silk material with an even weave, produced in a range of attractive shades and designs suitable for making party frocks.

LINEN

Linen (made from a fibre procured from the flax plant) is used for making household articles

Name of Material	Average Width	Kind of Material
	(Inches)	
Irish linen crash	18	A coarse natural coloured linen material suitable for needle weaving, embroidery, and specimen work
,, ,, ,,	21	
	36	
Unbleached linen	36	Coarse material suitable for drawn thread work.
Bleached linen	51	A fine material suitable for making into pillow cases and fine household articles
Coloured linen	36	A coarsely woven linen obtained in bright colours, suitable for fancy covers, curtains, appliqué work, and hem stitching.
Old Bleach linen	36	"Old Bleach" Fadeless coloured linen is suitable for dresses,
,, ,, ,,	51	needlework, curtains, etc.
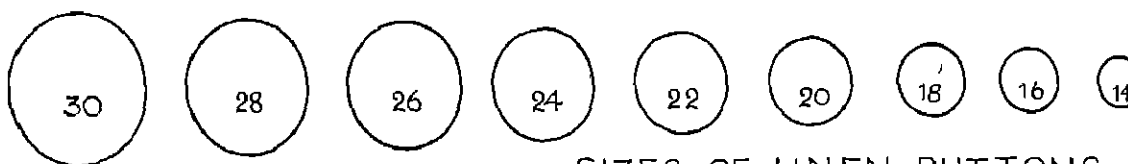
SIZES OF LINEN BUTTONS

FIG. 2

RAYON AND MIXTURE MATERIALS

Rayon is obtained from cellulose or vegetable matter. This is chemically treated until it becomes a liquid; then it is forced through minute jets and hardened, producing a fine fibre which has a remarkable sheen. This is twisted and spun into different thicknesses and the various rayon fabrics are produced, often in conjunction with cotton or wool.

Name of Material	Average Width	Kind of Material
	(Inches)	
Rayon fabric	36	A material produced to resemble silk. Used for underwear and dresses
Printed mossa repe	36	A dance frock fabric obtainable in a range of pastel colourings.
Celanese taffeta	36	A material produced to resemble silk taffeta
Celanese crêpe de Chine	38	A material produced to resemble silk crêpe de Chine.
Stockinette	51	A material resembling knitting, with a silky appearance. Suitable for making underwear and night wear.
Union	30–36	A mixture of cotton and wool, which produces a hard-wearing material
Viyella	31–36	A fabric made of Viyella yarn and rayon. Suitable for dresses and underwear

QUANTITIES OF MATERIALS REQUIRED

The quantity of material required for a garment depends on -

1. The width of the material.   2. The size of the garment   3. The style of the garment

Name of Garment		Width of Material
		(Inches)
Princess petticoat	Allow twice the length of the garment plus two hem widths	30
Nightgown with Magyar sleeves .	Allow twice the length of the garment plus two hem widths	36 - 40
Pyjamas	Allow twice the length of the trousers and twice the length of the magyar jumper, plus turnings	36 - 40
Magyar dress	Allow twice the length of dress, plus 10 in for hems and turnings.	30 40
Magyar jumper	Allow twice the length of the jumper	36 40
Overall .	Allow twice the length of the overall plus two hem widths	30 - 36
Knickers	Allow twice the length of the knickers	30
Dress with sleeves .	Allow twice the length of the dress plus two hem widths, plus the length of the sleeve	36 - 38
Gym blouse	Allow twice the length of the blouse plus the length of the sleeve	30 - 36

SEWING ACCESSORIES

Thimbles

These are provided to protect the finger while pushing a needle through the material.

They may be bought in all sizes and qualities, being made of ivorine, aluminium, silver, steel, brass   The thimbles to be recommended for lasting wear are branded "DORCAS."

Pins

Short White Pins are suitable for most purposes.

Lillikins are very short and fine pins, and are used when dealing with very fine work.

Steel Pins. These are similar in size to short whites, but being made of steel are used when dealing with velvet or pile fabrics, when ordinary pins would leave a mark

Needles

Sewing Needles or Sharps. These are made in all sizes to suit different kinds of material   The sizes graduate from No 1 to No. 12, No. 1 being the largest size and No. 12 the smallest and finest.

Betweens. These are made in sizes graduating from No. 1 to No 10, and are shorter than sharps

Darning Needles. These are made in various sizes and lengths   The kind used should be chosen according to the thickness of the material and the size of the darn.

Crewel Needles   These needles are made with large eyes so that embroidery threads of different thicknesses may be easily threaded.   They can be obtained in sizes graduating from No 0 to No. 10.

Rug or Tapestry Needles   These needles are made with a blunt end and are used for canvas work

Pointed Chenille Embroidery Needles   These needles are suitable for working embroidery with chenille, ribbon, or any very thick silk

Linen or Cambric Buttons

These are metal frames covered with one or more thicknesses of linen or cambric.

They can be obtained in various sizes graduating from 14 lines to 30 lines   (See Fig. 2.)

Tape

Linen Tape. This is a strong tape, and should be used on linen articles   It may be obtained in different widths graduating from No 00 to 10.

India Tape   This is made from cotton, and should be used on cotton articles

Sewing Threads

Sewing Cotton   Manufactured by J. P. Coats of Paisley, and others.

It may be obtained in different colours, and in various thicknesses which are denoted by a number , e g. No 12 thick, No 40 medium, No 80 fine, No 100 exceptionally fine

Cotton should be used for sewing cotton goods or where strength is required.

Basting or Tacking Cotton A cheaper quality of cotton manufactured for the purpose of supplying a thread for temporary stitches. It is not so strong, but serves the purpose intended.

It is supplied by a firm of "Ashworth's," and is wound on reels or cops containing 1,000 yards. Price 6½d. to 9½d

Mercerized Cotton Is a cotton treated chemically to produce a silky appearance It is strong, yet smooth, and is usually made in size 40.

It is largely manufactured by Dewhursts of Skipton, who supply it on reels containing 100 yards, price 4½d per reel They produce it in 280 shades, and black and white.

Patons, of Johnstone, Scotland, produce a strong twisted mercerized cotton, with the trade mark, "Ceta" This is wound on reels containing 1 oz.

Mercerized cotton is suitable for sewing wool, silk, rayon, and cotton fabrics.

Coton à Broder and Anchor Stranded Cotton. Made by Clarks of Paisley. These are mercerized cotton threads suitable for embroidery purposes on cotton, wool, and rayon fabrics. They are produced in all shades and varying thicknesses, and are made up in skeins.

D.M.C., Dollfus Mieg & Cie., France. A well-known brand of twisted or stranded mercerized cotton thread used for embroidery purposes on cotton or art silk fabrics. It may be obtained in all colours and various thicknesses

Star Sylko. Made by Ardens Obtained in all colours and wound on balls. Suitable for working on cotton and rayon fabrics.

Sewing Silk. Made in all colours and various thicknesses. It is suitable for very fine work and for sewing silk or wool fabrics. It is supplied on reels containing 50 yards, by Brough, Nicholson & Halls, of Leek, Staffs.

Embroidery Silk. Pearsalls manufacture—

Mallard Floss. A two-fold twisted silk for general embroidery Sold in skeins in 500 shades with a fast boiling dye Useful for working on any material.

Twisted Embroidery. Harder twisted than floss. Useful for dress embroidery and open stitching May be obtained in 350 unfading shades.

Broriche. Fine and tightly twisted It makes a strong edge, and so is suitable for *broderie anglaise*, Richelieu work and button-holing May be obtained in many shades.

Filoselle A twelve-stranded silk for general embroidery Being divisible, it is suited to many kinds of work. May be obtained in 450 fast boiling colours.

Flannel Silk. For working on flannel and similar materials. May be obtained in four sizes, cream only.

Maltese Silk Very fine and used for sewing down floss silk, gold thread, etc. Stocked in various colours.

Filo Floss A product between floss and filoselle. It has a brilliant appearance and can be obtained in 300 unfading shades. It needs care when working, but produces a good effect for general embroidery purposes

Court Embroidery Silk, made by Briggs of Manchester, is similar to Mallard floss. May be obtained in 400 shades

Rayon Embroidery Threads. Penelope Fibre. Made by Briggs, a lustrous artificial silk thread, loosely twisted, suitable for machine cable stitching May be obtained in all shades

Sylvan Embroidery. Made by Rickards. A product similar to but a little finer than Penelope. Obtained in all shades. Suitable for machine cable stitching and couching.

WOOL

Crewel Wool. Made by Pearsalls in 120 shades and in skeins containing 6 yards. For couching and embroidery on wool materials.

White Heather. An embroidery wool made by Paton & Baldwins (Halifax). In all fashionable shades In skeins containing about 6 yards.

PATTERN MAKING AND ADAPTATIONS

Planning out Patterns on to the Material

Plain White or Coloured Material

ALWAYS plan the pattern with the length of the garment following the selvedge way of material. Plan all bands and cuffs with the selvedge way along the length.

Floral or Patterned Material

If the pattern has a decided right and wrong way always plan all pieces of the garment with the top edge of the garment to the top of the design If necessary, match the design at the under-arm seam

When planning floral, striped, and checked materials, always place the centre of a design to the centre front and back of the garment

Velvet and Face Cloth

Plan out all patterns with the top of the patterns to one end of the material

Velvet should shade dark from the top to the bottom of the garment This makes it smooth upward

Face cloth should always smooth downward.

Checked Materials

Match the checks at the under-arm seams and at the sleeve seams.

All lines of the check should run continuously round the garment.

When planning a princess petticoat, if double width material is being used, plan the centre back and front of the petticoat to a selvedge fold

When planning out knickers and pyjama trousers fold the material with the two cut edges together, and plan the pattern on to the double material with the length of the garment to the selvedge way.

Tape Measure and Ruler

These are designed to meet the requirements of a person wishing to ascertain any required size.

Tape Measure This is a strong length of tape ⅝ in. wide and 60 in. long, on which are marked inches and divisions of an inch, this being the standard measurement used in Britain. Centimetres, the standard measurement used in France, may be marked on the reverse side

Being flexible, a tape measure is used for measuring round the figure and round curves

Ruler This is used to mark distances on a flat surface. The edge being straight and firm, it provides a useful guide when drawing a straight line between two given points.

Frequent use of tape measure and ruler trains the eye in judging size and distance

This power of judgment being exceptionally useful, practice in measuring should be given at every opportunity

Useful Constructions

A Square

Step I *A square has four sides,* each being of equal length. The children should be provided with a piece of paper 12 in. square, and should be shown how to measure the four sides of it, and thus prove the rule that a square has four sides of equal length

An Oblong

Step II. *An oblong has four sides* Fold the square of paper in half. This produces two oblongs.

Step III. Fold the paper in half again This produces four squares. Crease well along the folds and cut along the creases These squares to be used for the following exercises

A Triangle

Step IV *A triangle has three sides* Fold a 6 in. square of paper in a diagonal line from corner to corner. This produces two triangles

Step V. Take the second 6 in. square of paper Repeat Step IV Crease well and open out. Fold with the opposite two corners together and crease well This produces four triangles, which should be cut out

A Circle

Step VI   A circle is a continuous line an even distance from a given centre. Take the third 6 in. square of paper and fold to produce four squares as in Steps II and III   Curve in a line from A to B   Cut through the four thicknesses of paper along the curve. When opened out this produces a circle.

Methods of Obtaining Patterns

Pattern making by paper folding
Drafting a pattern from direct measurements,
Using a bought pattern
Patterns obtained from other garments.
Pattern making by paper folding is suggested as the simplest method of obtaining patterns of garments for children up to the age of 12 years.
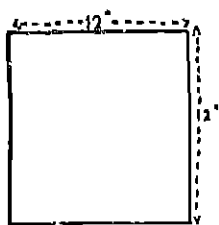
Step I   A Square
12 in. × 12 in.
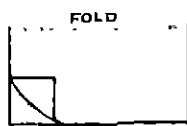
Step II   A Square of 12 in. × 12 in.
Produces Two Oblongs 12 in × 6 in.

Step III: A Square of 12 in. × 12 in.
Produces Four Squares 6 in. × 6 in.

Step VI: A Square of
6 in.   6 in   Produces
a Circle 6 in × 6 in.
Diameter

Step IV· A Square of 6 in. × 6 in.
Produces Two Triangles

Step V. A Square of 6 in. × 6 in.
Produces Four Triangles
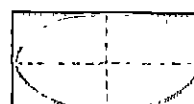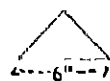
Step VII. An Oblong
of 6 in. × 3 in. Pro-
duces an Oval

FIG. I

An Oval

Step VII   An oval is a continuous line an uneven distance from a given centre. Take the fourth 6 in. square of paper and fold to produce two oblongs as in Step II. Cut along the crease. Take one oblong and fold to make four oblongs. Curve from A to B. Cut through the four thicknesses of paper along the curve. This produces an oval.

Paper folding cultivates accuracy, dexterity, and neatness, qualities which will be found valuable when work is transferred to material in later stages.

Average Scale of Measures

The following table will be found useful as a guide when making patterns for children's garments.

When dealing with abnormal figures, direct measurements should be taken

Age of Child Yrs	Average Height of Child Ft In	Average Bust Measure In	Average Length Neck to Waist In
3	3 –	26	9
4	3 2	26	9½
5	3 4	27	10
6	3 6	27	10½
7	3 8	28	11
8	3 10	28	11½
9	4 –	29	12
10	4 2	30	12½
11	4 4	31	13
12	4 6	32	13½

Proportions of the Body

Face = ⅛ of the height.
Neck to waist = ⅕ of the height.
Waist to knee = ⅜ of the height.
Knee to foot = ¼ of the height.
Neck to waist plus waist to knee = ⅝ of the height = approximate length of a frock.
Neck to foot = ⅞ of the height = approximate length of a nightgown.
The sleeve length is taken from the end of the shoulder over the elbow and down to the wrist This works out to equal about ⅜ of the height.

Block Bodice Pattern

This pattern is suitable to use as a foundation on which to build patterns for children's garments

Specimen pattern for girl of 10 years—

Cut an oblong of paper ½ of the bust measure plus 1 in. × the back length plus ½ in.

Bust measure 30 in

Back length 12½ in., e g oblong to measure 13 in. × 16 in

Mark the corners of the oblong ABCD as in diagram

A to B equals ½ the bust measure plus 1 in. and equals the width of pattern.

B to C equals the back length plus ½ in. and equals the length of pattern.

Fold the paper width ways into 8 equal divisions (see diagram).

Fold the oblong ABCD into 2 equal divisions length ways.

Fold the oblong ABFE into 3 equal divisions length ways.

Back neck curve = 1 division on and ½ in down

Front neck curve = 1 division on and 1 division down

Back shoulder = 3 divisions on and 1¼ in. down and ¼ in. out

Front shoulder = 3 divisions on and ⅞ in. down and ½ in out.
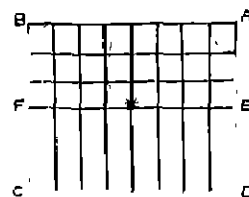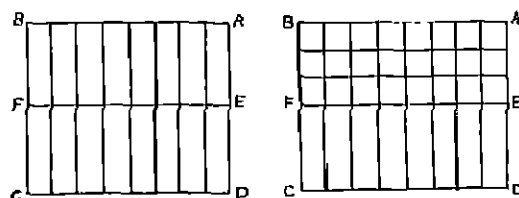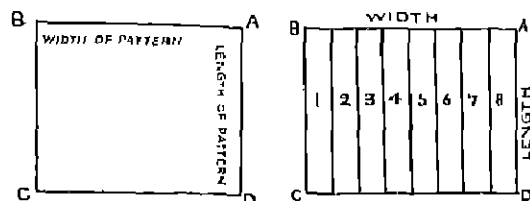
FIG. 2
Block Bodice Pattern

The star denotes the centre of the paper Curve in the armhole from the end of the front shoulder to the star, and to the end of the back shoulder.

For sizes 3 to 6 years it may be necessary to deepen the armhole curve at the under arm about ½ in , and also to lower the neck ¼ in all round, as the proportions work out rather too small in these sizes

Extension of the Block Bodice Pattern

This pattern is obtained from the block pattern and from it may be built patterns of the following:—

1. Dresses
2. Princess petticoats.
3. Nightdresses
4. Overalls.
5. Dressing gowns.

EXTENSION OF BODICE BLOCK PATTERN
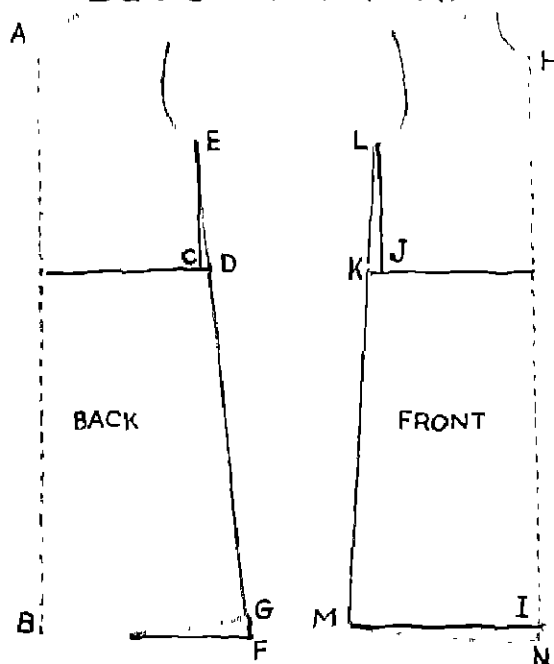
Fig. 3

Place the block patterns on to a large sheet of paper, pin in position, and draw round the outline of the back and the front patterns

Back —

A-B — the length of the garment.
C-D — ¼ in.
F-G — ¼ in.

Front —

J-K — ¼ in.
L-M — E-G on the back pattern.
I-N — ¼ in.

Sleeve Pattern

Average sizes for sleeve patterns—

Age of Child	Size of Oblong		Shaping
	Length In	Width In	In
5 to 6 yr	14 ×	10½	3
7 to 8 ,,	16 ×	11½	3
9 to 10 ,,	18 ×	12	4
11 to 12 ,,	20 ×	13	4

Fig. 4
Sleeve Pattern

QUAKER COLLAR

SAILOR COLLAR
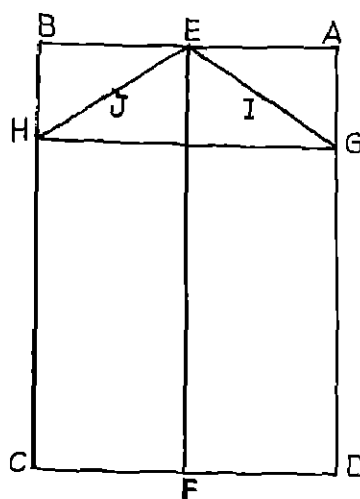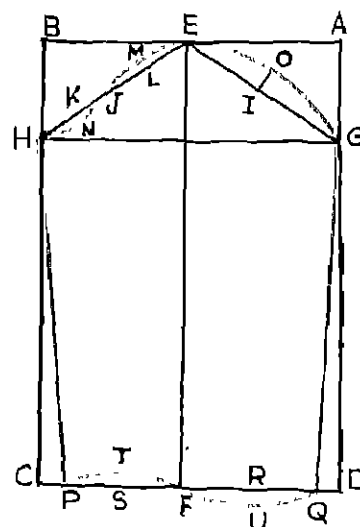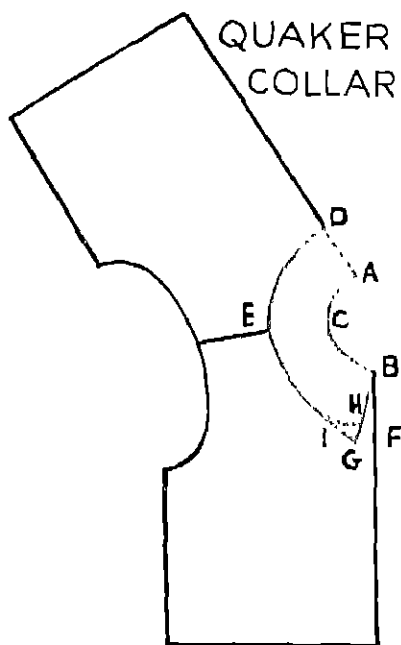
ETON COLLAR
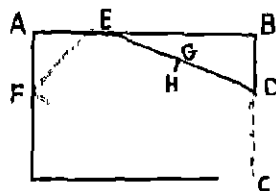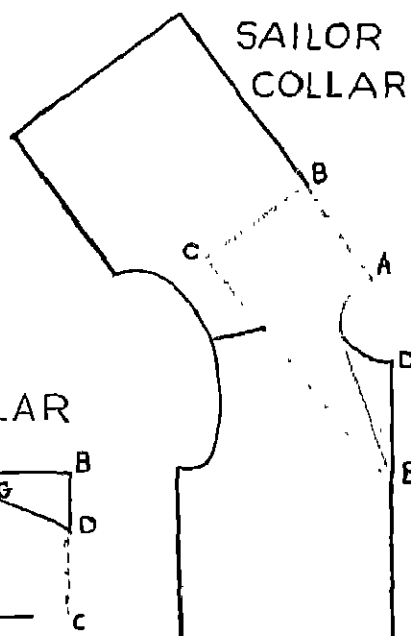
FIG. 5   FIG. 6   FIG. 7

Specimen pattern for girl 9–10 years old—

Cut an oblong of paper 18 in. × 12 in.

Mark the corners $ABCD$ as in Fig. 4

$A–B$ = the width of sleeve.
$A–D$ = the length of sleeve.
$A–E = \frac{1}{2} AB$
$C–F = \frac{1}{2} CD$.
$A–G$ = amount of shaping.
$B–H$ = amount of shaping
$E–I = \frac{1}{2} EG$.
$E–J = \frac{1}{2} EH$
$H–K = \frac{1}{2} HJ$.
$E–L = \frac{1}{2} EJ$.
$L–M = \frac{1}{4}$ in.
$K–N = \frac{1}{2}$ in.

Curve from H through NJM to E for the front part of sleeve.

$I–O = 1$ in.

Curve from E through O to G for the back part of sleeve.

$C–P = 1$ in.
$D–Q = 1$ in.
$Q–R = \frac{1}{2} Q–F$

$P–S = \frac{1}{2} P–F$.
$S–T = \frac{1}{2}$ in.
$R–U = \frac{1}{2}$ in.

Curve from P through TRU to Q for the lower edge of sleeve.

The seam of this sleeve is arranged to fit to the under-arm seam of the garment.

Collar Patterns

Three of these patterns are obtained from the block bodice patterns. Place the back and front block patterns on a sheet of paper, keeping the two shoulder lines together, and draw round the patterns

For Quaker Collar—

$A–D = 2\frac{1}{2}$ in or the depth of the collar
$C–E = 2\frac{1}{2}$ in or the depth of the collar.
$B–F = 3$ in
$F–G = 1$ in

Rule from $B–G$ and curve from G through $E–D$ for the outer edge of the collar

For Peter Pan Collar—

Draft the pattern as for the quaker collar.
$G–H \quad 1\frac{1}{2}$ in
$G–I \quad 1\frac{1}{2}$ in

Curve from B through $H–I–E$ to D for the outer edge of the collar.

For Sailor Collar—

A–B = 5 in

Rule a line at right angles to the back fold line from B

B–C = 5 in

D–E = 5 in

Curve in the neck from A–F

Rule from B–C and C–E for the outer edge of the collar

For Eton Collar—

A–B = 9 in

B–C = 6 in.

B–D = 2¾ in

D–E = 2¼ in.

A–F = 2¾ in

E–G = ⅓ ED

G–H = ⅓ in

Swimming Costume

This pattern is obtained from the front block pattern

Specimen pattern for child of six years—

Height 3 ft. 6 in.

Bust 27 in.

Back length 10½ in.
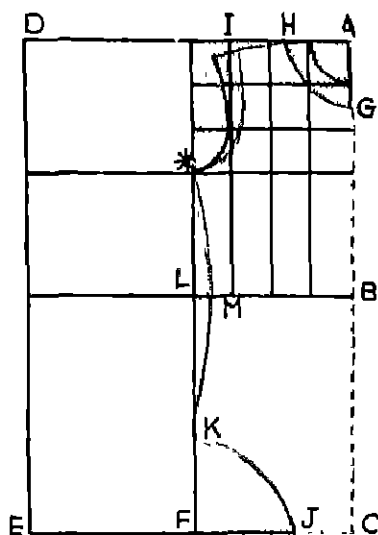
Fig. 8

Child's Swimming Costume

Pin the block pattern on to a large sheet of paper, draw round the pattern lines, and remove the block pattern.

Extend the line AB for the length of the garment — ⅓ the height.

A–C = the length of the garment.

D–E = AC.

Extend the line from the * to the length of the garment.

*–F = the under-arm seam line

A–G = 1½ divisions

A–H = 1½ divisions.

H–I = the length of the shoulder 2 in.–3 in

C–J = ⅓ CF

F–K = 4 in.

L–M = 1 in.

To Cut Out the Pattern

Fold the oblong $ADEC$ into 2 divisions widthways.

Pin the 2 thicknesses of paper together to keep in position.

Cut through the double paper round all the pattern lines.

Remove the pins: this will give two patterns, half the front and half the back.

To Plan Out the Pattern on to the Material

Place the centre front and back of the pattern to a fold of the material.

The lines CJ on the back and front may be placed together to avoid a seam.

Knicker Patterns

Average scale of sizes for knickers (widths and lengths may be altered according to the style and the shape required)—

Age of Child	Length of Knickers	Width of Knickers
	In	In
3 yr	13	22
4 ,,	14	23
5 ,,	15	24
6 ,,	16	25
7 ,,	17	26
8 ,,	18	27
9 ,,	19	27
10 ,,	20	28
11 ,,	21	28
12 ,,	22	28

Direct measurements may be taken from the actual figure, but as this entails time it will be found an advantage if girls make patterns to proportionate measures, according to ages.

The patterns when made should be tested for lengths and widths.

If required, the patterns may be altered to the size required as indicated in Fig. 10.

Specimen pattern for girl of 9 years

Cut an oblong of paper the length of the knickers by the width of the knickers.

This size would be determined by referring to the scale

Size of oblong: length = 19 in.
width = 27 in.

Curve from G–H for the leg seam.

$E–I = \frac{1}{2}$ division.

$A–J = \frac{1}{2}$ division.

Rule from I–J for the back waist line.

$K = 1$ division on from A and $\frac{1}{2}$ division down

Rule from I–K for the front waist line.
Rule from G–J for the back seam line.
Rule from G–K for the front seam line.

KNICKER PATTERN
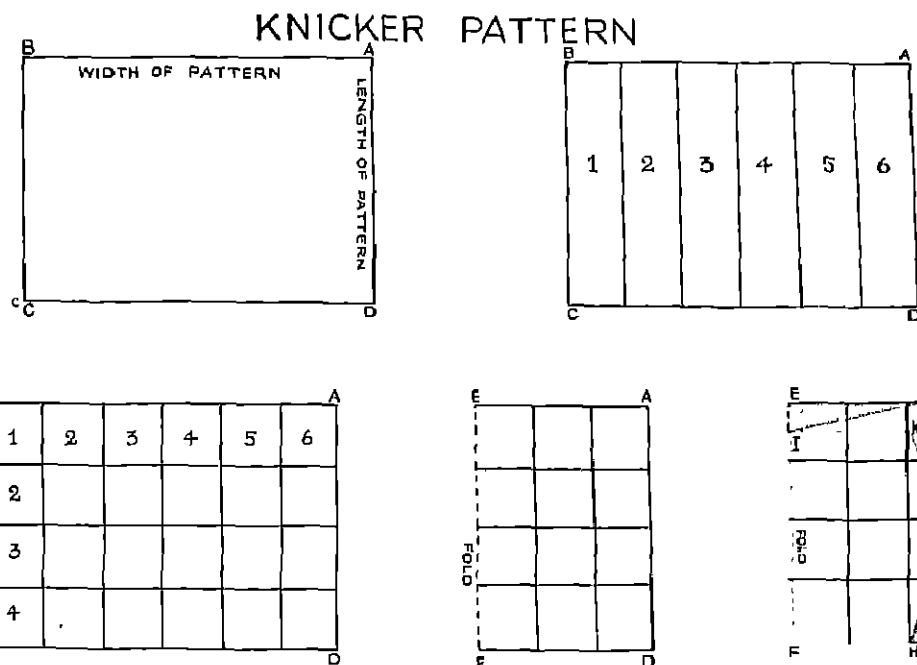
Fig. 9

Mark the corners of the oblong ABCD, as in Fig 9.

A–B = the width of knickers.

B–C = the length of knickers.

Fold the paper widthways into 6 equal divisions.

Fold the paper lengthways into 4 equal divisions (Fig. 9).

Fold the paper widthways into half, and mark the fold EF

Place the fold to the left side of the worker.

D–G = 1 division
D–H = 1 division

To Cut Out the Pattern

Pin the two layers of paper together to keep in position

Cut through the double paper from H through G and J to I for the back portion of the pattern.

Take out the pins and open out the pattern

Cut through the single paper from G through K to I for the front portion of the pattern.

For patch pocket cut a square of 5 in. This allows for a ½ in. hem on the top edge and ¼ in turnings round 3 sides of the pocket.

The pocket is sewn on to the right leg of the knickers

Trunk-knicker Pattern

These knickers are suitable for girls 3–11 years of age.

Specimen pattern for girl 7 years (average height 3 ft. 8 in. = 44 in.)—

Length of knickers = $\frac{1}{4}$ of the height plus 3 in. = 14 in.

Fold the oblong widthways into 3 equal divisions.

$A-G = 1\frac{1}{2}$ in.

$B-H = \frac{3}{4}$ in.

$H-I = \frac{3}{4}$ in.

Rule from $A-I$ for the back waist line.

Rule from $G-I$ for the front waist line.

ADAPTING KNICKER PATTERN TO SIZE REQUIRED

PATTERN MADE SHORTER IN BODY PART

DIAGRAM 1
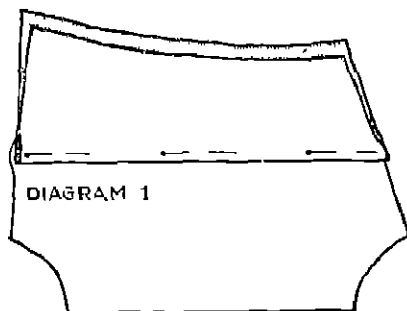
PATTERN MADE NARROWER

DIAGRAM 2
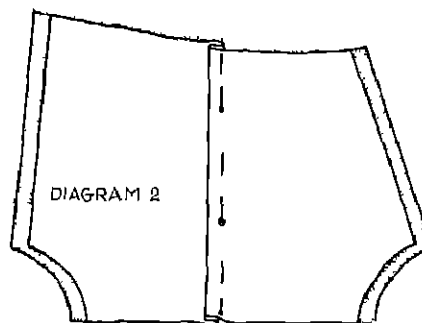
PATTERN MADE SHORTER AND NARROWER

DIAGRAM 3
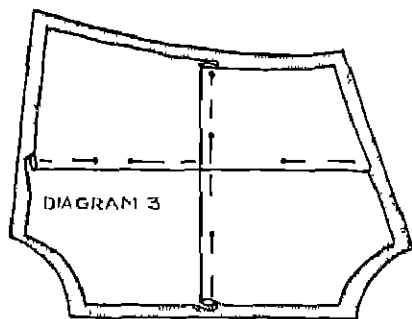
PATTERN MADE WIDER

DIAGRAM 4
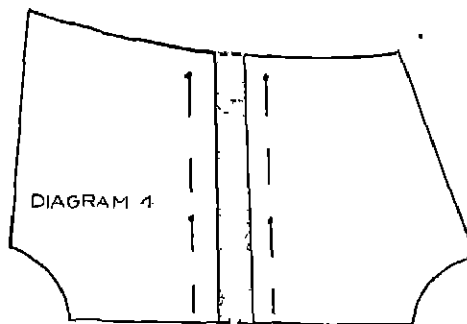
FIG. 10

Width of knickers = the length plus 8 in. = 22 in.

Cut an oblong of paper twice the length of the knickers × $\frac{1}{4}$ the width of knickers, e.g. 28 in. × 11 in.

$A-B = \frac{1}{4}$ the width of knickers.

$A-D =$ twice the length of knickers.

Divide the oblong lengthways into 2 equal divisions and mark E and F.

Fold the paper along the line EF.

Fold the oblong $ABFE$ lengthways into 3 equal divisions.

$FJ = \frac{2}{3}$ of a division.

$FK = 2$ divisions.

To Cut Out the Pattern

Cut through the double paper from $K-J$ for the leg shaping.

Cut through the double paper from $J-I$ for the side seam.

Cut through the double paper from $I-A$ for the back waist line.

Open out the pattern and cut through the single paper from $G-I$ for the front waist line.

TRUNK - KNICKER PATTERN

FIG. 11

PYJAMA SUIT PATTERN

FIG. 12

FIG. 13

Specimen pattern for a girl of 9-10 years is given here

Pin the knicker pattern on to a large sheet of paper, draw round the outline of the pattern, mark the centre-fold line, and then remove the pattern.

A–D is the centre line of the knickers

A–E = the full length of the trousers ($\frac{5}{6}$ of the height)

E–F = *D–B* less 1 in.

E–G = *D–C* less 1 in

Pyjama Suit Pattern

This pattern is obtained from the knicker and magyar patterns.

Magyar Jumper Pattern

Bust 30 in
Back length 12½ in
A–B = ¼ of the bust + 1 in
A–C = the back length + ½ in
A–F = 4½ in
A–I = 2½ in for front neck shaping
A–G = ½ in for back neck shaping
B–H = 1½ in
E–I = the length of the sleeve from the neck across the shoulder to the length required

Rule a line at right-angles to *H*
I–J = the width of the sleeve
H–L = ½ *HK*
L–M = 1½ in
L–N = 1½ in
K–O = ½ in

Curve in the sleeve seam from *J* through *N* to *M*
Rule in the under-arm seam line from *M* through *O* to the length of the garment required

Jumper Pattern

G–Q = the length of the jumper from the nape of the neck

Q–R = the jumper line.

FUNDAMENTALS OF NEEDLE CRAFT

STITCHES FOR JUNIOR WORK

Temporary Stitches

THESE are stitches used either to mark out fitting, pattern, or style lines, or to hold the work in position until the permanent stitches are completed

Even Tacking Stitch

Even tacking stitch is used for keeping in position seams, tucks, and decorative parts. It

LONG AND SHORT TACKING

Fig. 1

UPRIGHT TACKING

Fig. 2

is a straight even stitch with spaces and stitches $\frac{1}{4}$ in to $\frac{1}{2}$ in long. See Fig 7, "Needlework in Correlation with Art."

Long and Short Stitch

Long and short stitch is used when dealing with flannel or any stubborn material (see Fig. 1).

Upright Tacking Stitch

This tacking is used when fixing gathers into a band.

Method of Working. Bring the needle through on to the right side of the band $\frac{1}{4}$ in. up from the edge which rests on the gathers Insert the needle exactly below where the cotton came out, and take a slanting stitch $\frac{1}{2}$ in. from the first one, bringing the needle out $\frac{1}{4}$ in. away from the edge of the band as before (Fig. 2)
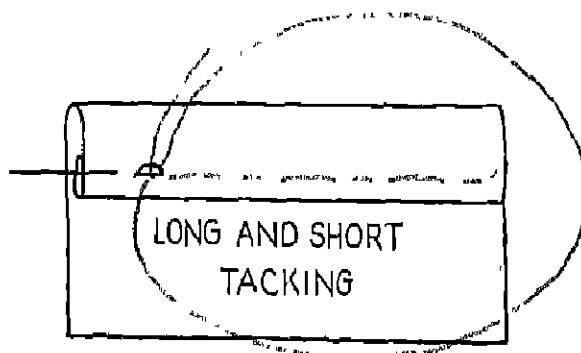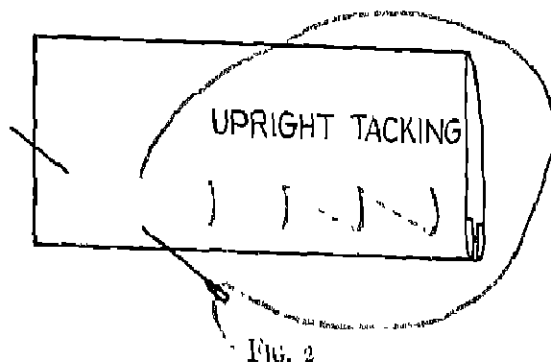
Thread Tacking

This is used to mark out any fitting or style lines on double material.

Method of Working. Double cotton must be used. This tacking is an even stitch with loops of cotton left at each stitch, the spaces and stitches being $\frac{1}{2}$ in. apart. The two thicknesses of material are then pulled apart, and the threads are cut through the centre of the cotton between the two edges of the material. If the thread tackings are pressed over, after the

material has been pulled apart but before cutting the threads, it will help to keep the thread tackings in position.

Permanent Stitches

These are stitches used, when constructing garments, for joining seams and making hems.
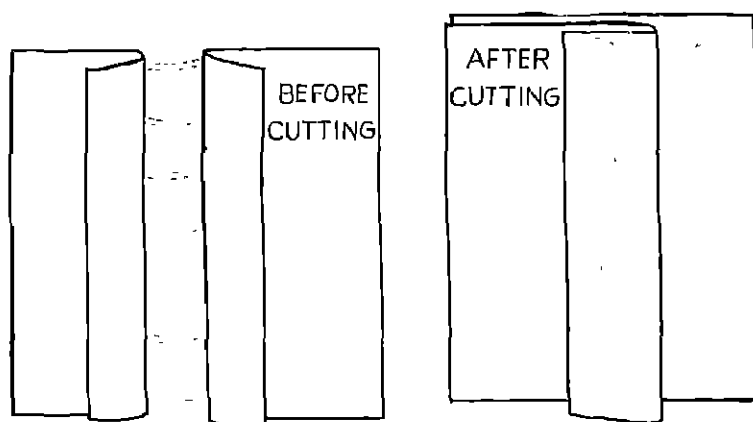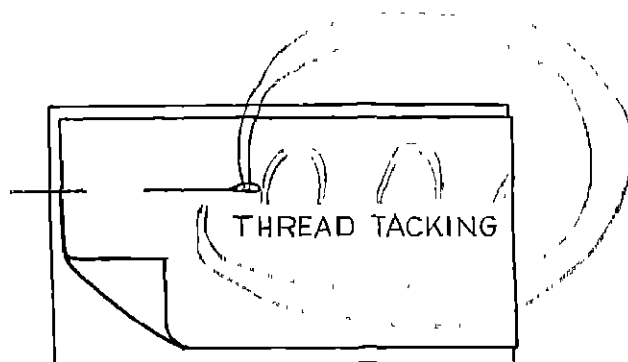
FIG. 3

Running Stitch

This is a straight even stitch with spaces and stitches $\frac{1}{4}$ in. to $\frac{1}{16}$ in. long, according to the thickness of the material (see Fig. 6 (1)).

Method of Working. Commence with a back stitch and take up and pass over two threads or more according to the type of material.

To Join Cotton Fasten off the old cotton with

a back stitch, running the end of the cotton between the fold of the material. Begin the new cotton by running over the old stitching for $\frac{1}{2}$ in and make a back stitch

Hemming

This stitch is used for fastening down edges

Method of Working Hemming is worked from right to left The whole stitch forms a V of which one stroke shows as a diagonal stitch on the right side, and the other as a diagonal stitch on the wrong side Insert the needle under the fold of the hem, and draw through near to the edge of the hem, leaving an end of cotton. Put the end of cotton under the fold of the hem and hold firmly with the finger and thumb. Insert the needle to the left below the edge of the fold to make a short diagonal stitch, bringing the needle out through the fold near to the edge of the hem, making a similar stitch on the wrong side (see Fig. 6 (4a-d)).

To Join Cotton. Leave an end of cotton $\frac{1}{2}$ in long. Unpick half a stitch and then place the needle with the new cotton in the hole from which the old cotton has been drawn, leaving an end Twist the ends of the old and new cotton together and tuck them under the hem, and continue the hemming

To Fasten Off Make a stitch over the last stitch and run the needle through the fold of the hem

Seaming

This stitch is used for joining two edges of material together (see Fig. 6 (3a c))

Method of Working. Seaming is worked from right to left.

Insert the needle into the fold near to the

thumb, and draw the cotton through, leaving ¼ in. of cotton. With the point of the needle lay this end of cotton along the top of the fold and sew it in with the other stitches. Point the needle toward the chest in working.

To Join Cotton. Leave an end of cotton ½ in. long Unpick half a stitch and place the needle
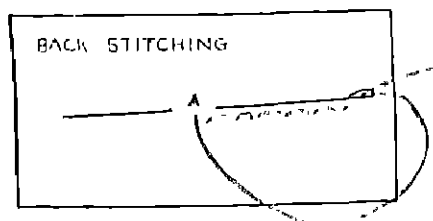
FIG. 4

with the new cotton into the hole of the last stitch. Draw the new cotton through, leaving an end ½ in long. Lay the ends along the top of the fold and continue the seaming, sewing in the two ends

To Fasten Off. Seam backward for a few stitches to fasten off (see Fig 6 (3c)).

Overcasting

This stitch is used for neatening or trimming the edges of a garment. Overcasting is worked from left to right over an edge of material, in the same manner as seaming (see Fig. 9).

Gathering

This stitch is used when fixing two pieces of material together where fullness is required , e.g. setting a skirt on to a yoke or bodice (see Fig. 6 (2)).

Method of Working. This stitch is worked from right to left.

Gathering is a straight stitch with the stitches equal to twice the length of the spaces, e g two threads are taken up and four are passed over. Take a length of cotton long enough to finish the gathering. Begin with a back stitch, making it quite secure before commencing the gathering. Leave the gathering thread at the left-hand edge until the skirt has been set on to the bodice or yoke. Rethread the needle with the gathering cotton and fasten off firmly with a back stitch.

Back Stitching

This stitch is always worked through double material.

Back stitching is used for joining two thicknesses of material together, when a strong joining is required, e.g. setting on a tape.

Method of Working. This stitch is worked from right to left. Insert the needle between the two edges of the material and bring it out for the commencement of the stitch Insert the needle two threads to the right of point *A*, see Fig 4, and bring it out two threads to the left of point *A*, taking up four threads on the needle. The stitch on the right side of the work only covers two threads, but on the wrong side the stitch covers four threads. Each stitch is formed in this way, care being taken to put the needle in exactly at the end of the last stitch.

Loop Stitching

Loop stitching is used for scalloping and for neatening the raw edges of a garment. Worked to a design it may be used for decorative purposes.

Method of Working. This stitch is worked from left to right. Run the cotton into the
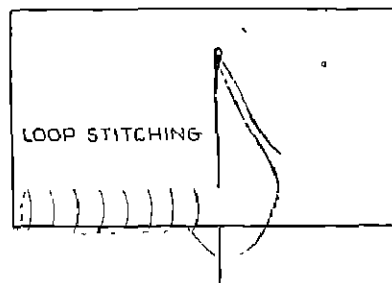
FIG. 5

material and bring the needle out either at the outer edge of the scalloping or at the cut edge. Insert the needle at the inner edge of the scalloping or neatening, holding the loop of cotton under the left thumb. Draw the needle through the loop of cotton and work in this way along the length. The depth and spacing of the stitches depends on the kind of material used and the purpose of the stitch.

To Join Cotton. Run the needle in at right

RUN STITCHING

I

GATHERING

2

SEAMING

3 (*a*)

FASTENING OFF

3 (*c*)

JOINING

3 (*b*)

HEMMING

4 (*a*)

HEMMING

4 (*b*)

JOINING

4 (*c*)

FASTENING OFF

4 (*d*)
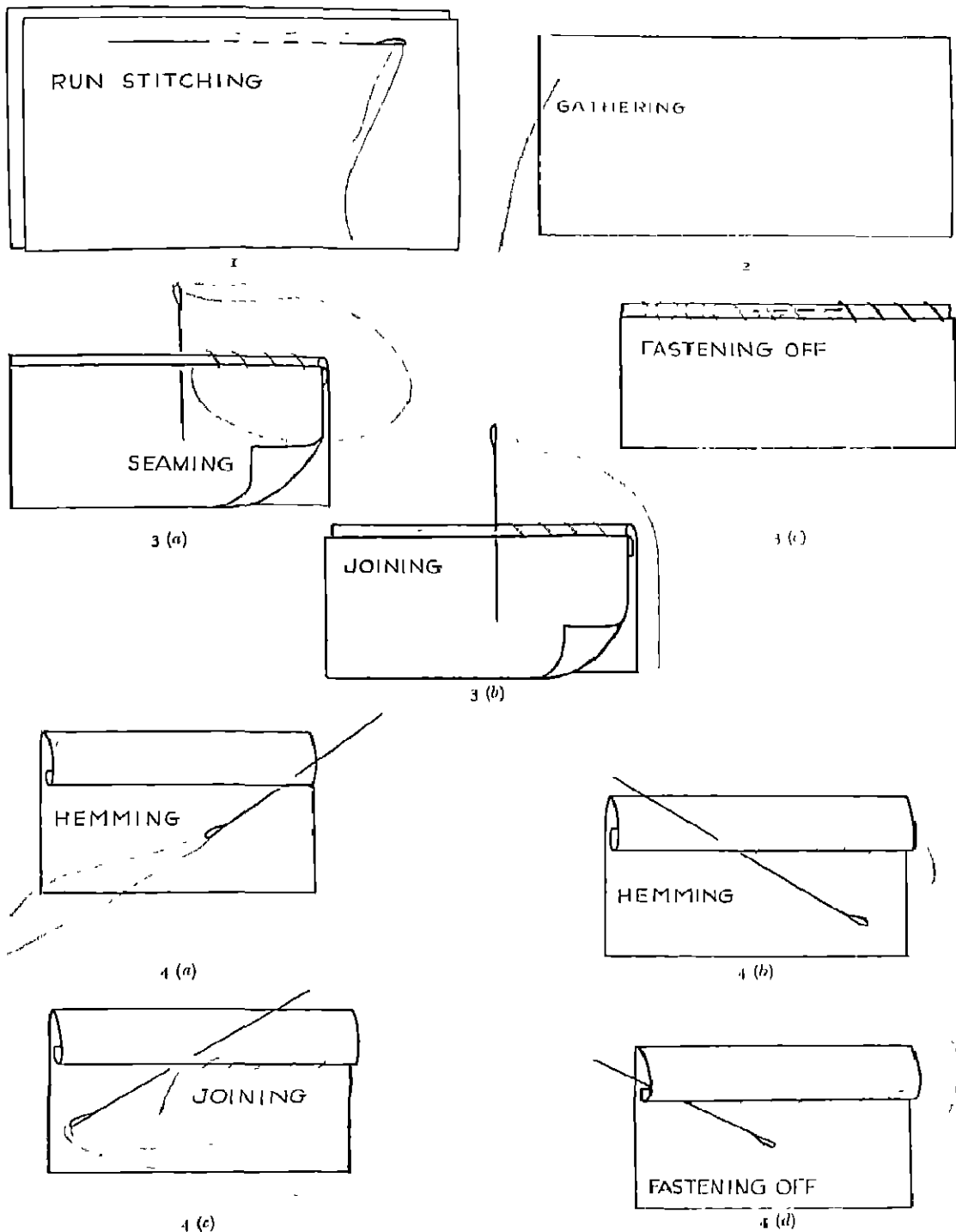
FIG. 6

Four Permanent Stitches

1187

angles to the raw edge at the right-hand side of the stitch, and fasten off with a back stitch on the wrong side of the material. To fasten on the new cotton run along the left side of the last stitch and bring the needle out into the loop of the last stitch. Continue the stitching.

Herring-boning

This stitch is used, when making flannel garments, for neatening seams and edges.

Method of Working. This stitch is worked from left to right. Hold the seam or hem with the raw edge toward the chest. Insert the needle beneath the edge, bring it out four
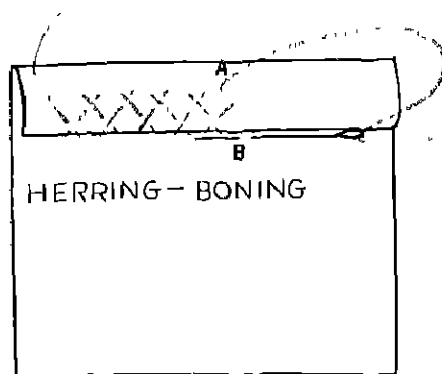
Fig. 7

threads above the cut edge and secure with a back stitch. Keeping the cotton above the needle, place the needle below the raw edge, four threads to the right of Point *A* (Fig. 7), and take up two threads. Keeping the cotton below the needle, insert the needle four threads above the cut edge and four threads to the right of Point *B*, see diagram.

To Join Cotton. Instead of taking up two threads on the needle, pass the needle between the two thicknesses of flannel so that it comes out in the last complete stitch, four threads to the left. Make a back stitch over the top part of the stitch through the single material, and pass the needle into the fold where the end of the cotton can be cut off. To fasten on the new cotton, place the needle beneath the edge and bring it out two threads to the left of the last half-stitch. Make a back stitch over the top of

the half-stitch to secure the cotton. The herring-boning is then continued.

Cutting and Making a Button-hole

A button-hole is used for fastening purposes. It must be worked through double material and in all cases must be made strong and neat.

Method of Cutting. Crease the material along a straight thread. Mark off the length of the button-hole on the crease, equal to the diameter of the button, at the distance of half the diameter of the button in from the edge of the garment or band (Fig. 9). Insert the point
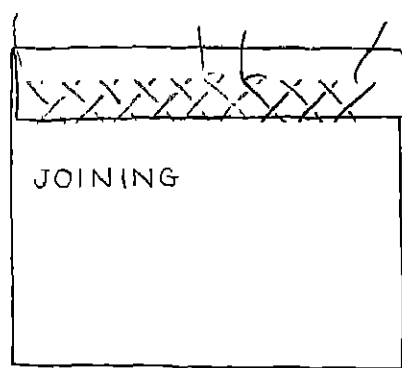
Fig. 8

of the scissors through the centre of the button-hole crease and cut carefully toward each end.

Button-hole Stitch

This stitch is worked from left to right over a double edge of material. Place the needle between the two edges of the material, and bring it out two threads from the left-hand side of the slit. Make a tiny back stitch bringing the needle out into the end of the slit. Insert the needle into the material four threads down from the cut and one thread to the right. Put the double cotton from the eye of the needle round the point from left to right, and draw the needle upward away from the worker. Make each stitch in this way leaving one thread between each stitch. The round end of the button-hole is overcast to form a semicircle, as in Fig. 9, using 7 or 9 stitches.

WORKING A BUTTONHOLE

DIAMETER OF BUTTON

EDGE OF GARMENT

JOINING COTTON

FINISHED BUTTONHOLE

SHOWING ROUND AND SQUARE ENDS

1 2 3 4 5 6 7 8 9

9 8 7 6 5 4 3 2 1

OVERCASTING
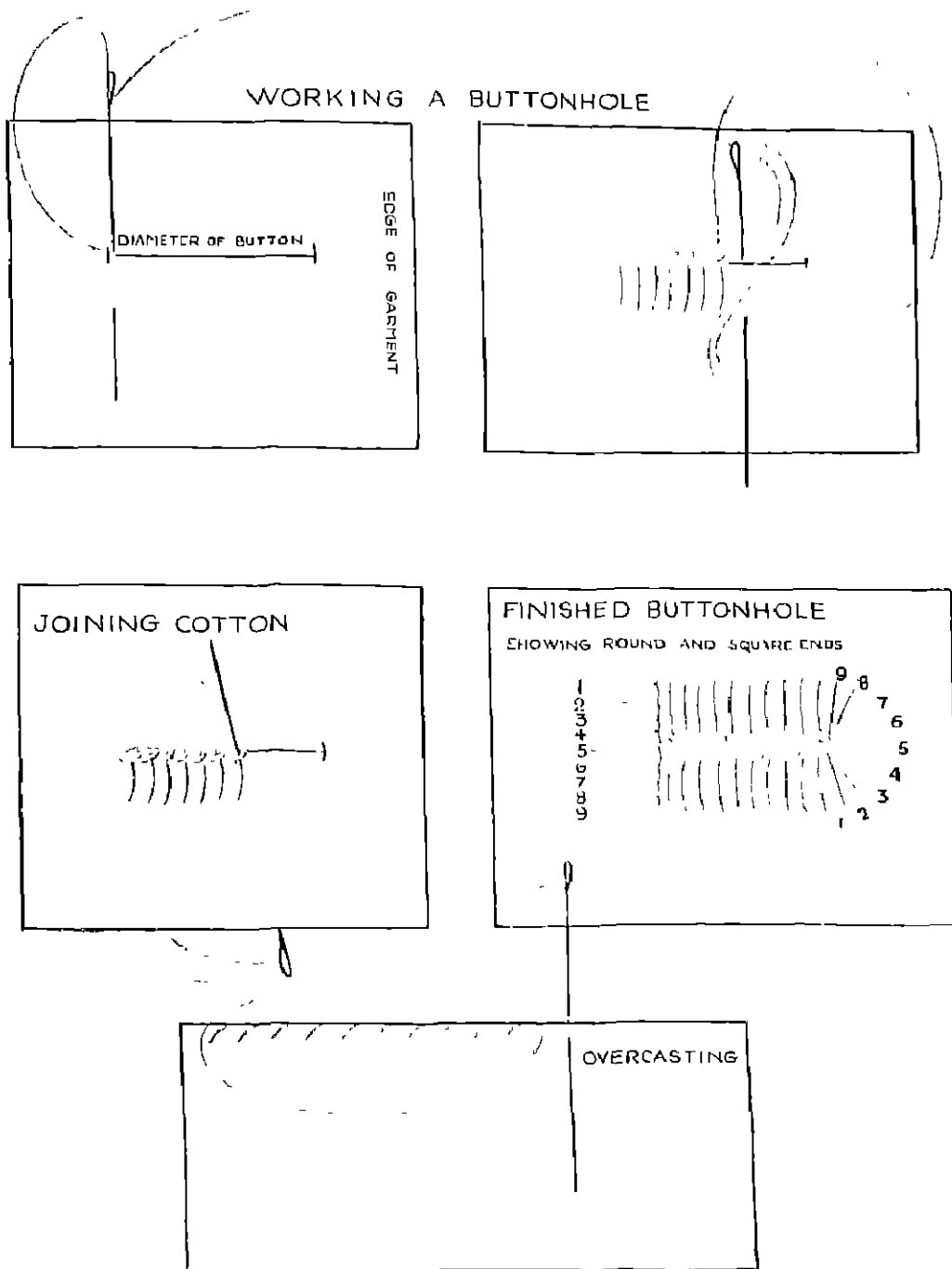
FIG. 9

For the square end of the button-hole use the same number of stitches as for the round end, the centre stitch being worked into the slit of the button-hole, as in diagram.

To Join Cotton. Push the needle through to the wrong side of button-hole, and run stitch parallel to the slit between the stitches for $\frac{1}{2}$ in. and fasten off with a tiny back stitch.

Run-stitch with the new cotton for $\frac{1}{2}$ in. parallel to the slit, and bring the needle through the loop of the last stitch (see Fig 6 (1)).

Continue working button-hole stitch as before.

Machining

The following pamphlets and charts issued by the Singer Sewing Machine Co., Ltd., Educational Department, Singer Building, 1-9 City Road, London, E.C.1, should be useful to teachers of needlecraft subjects—

The Decorative Treatment of Machine Sewing by Ethel R. Hambridge. Price 6d.

A Manual of Family Sewing Machines. Price 6d.

Teaching Needlework with an Eye to the Future. Free on application.

Special Hints for Schools. (On card for hanging.) Free on application.

Practical Needlework for Schoolgirls. Free on application.

Paper patterns of schoolgirl's outfit illustrated in above booklet Complete set 1s. 6d.

Darning leaflet. Free on application.

Wall charts illustrating oiling, threading, etc. Free on application.

Also small cards as above for children's own use.

Special short courses of lessons are available, on application, for teachers interested in machine work as applied to modern needlework.

It is therefore suggested that, if time permits, some preparatory talks on machining should be given to the oldest Juniors.

PROCESSES

Hems

A Simple Hem Fold a narrow turning on to the wrong side of the material, fold a second turning the width of the hem required, and tack into position Hem along the edge of the fold.
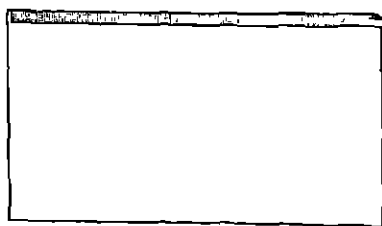
SIMPLE HEM
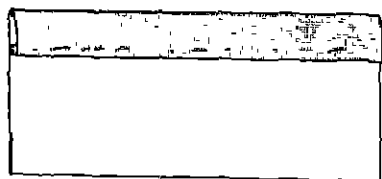
FIG. 10

Seams

Run-and-Fell Seam

The run-and-fell seam is suitable for use on under-garments where a flat seam is required.

Method of Working. Place the two right sides together with the front edge of the garment $\frac{1}{8}$ in. above the back edge of the garment. Pin to keep in position. Turn the front edge of the garment over the back edge of the garment, and tack into place, being careful to keep the edge straight. Run stitch just below the raw edge. When the running is completed, open out the work, lay the fell down on to the material, and tack into place, taking care to have the fell quite flat before hemming down. When the fell is finished it should fall towards the back of the garment.

French Seam

This seam is used on thin materials where an invisible joining is required.

Method of Working. Place the two wrong sides of the garment together, with the raw edges quite even. Run stitch or machine $\frac{1}{8}$ in. away from the edge. Cut down the turning to

FRONT EDGE OF GARMENT

BACK   EDGE OF GARMENT

WRONG SIDE

WRONG SIDE

WRONG SIDE

RIGHT SIDE

FIG. 11

Run-and-Fell Seam

RIGHT SIDE

WRONG SIDE

WRONG SIDE

RIGHT SIDE
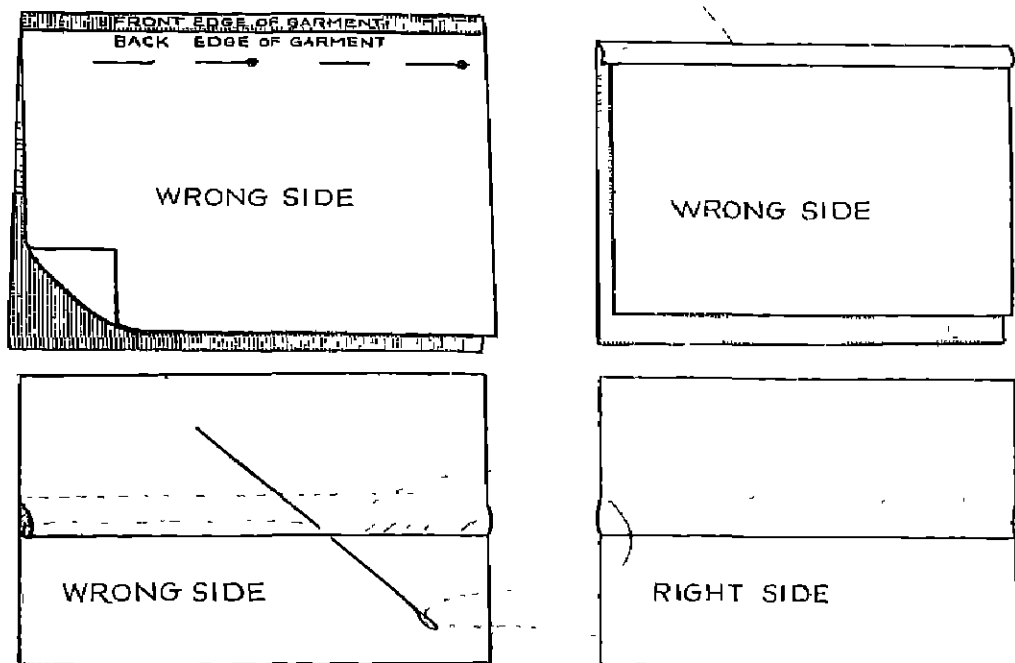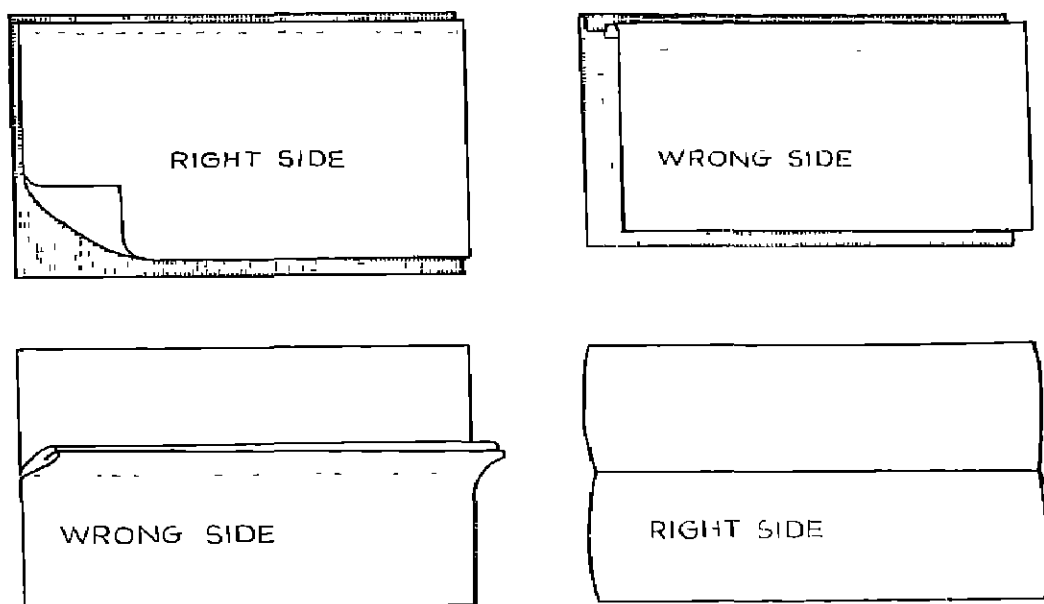
FIG. 12

French Seam

about ⅛ in. Turn to the wrong side and fix the seam with the two edges exactly together. Tack firmly in position ⅛ in. or ¼ in. away from the edge. Run stitch or machine close to the tacking.

This seam when completed encloses all the raw edges.

Setting on a Band

Making a Band. Cut the band with its length the selvedge way of the material. Fold a narrow turning on to the wrong side of each selvedge edge and also at the ends of the band, pressing well with the finger and thumb.
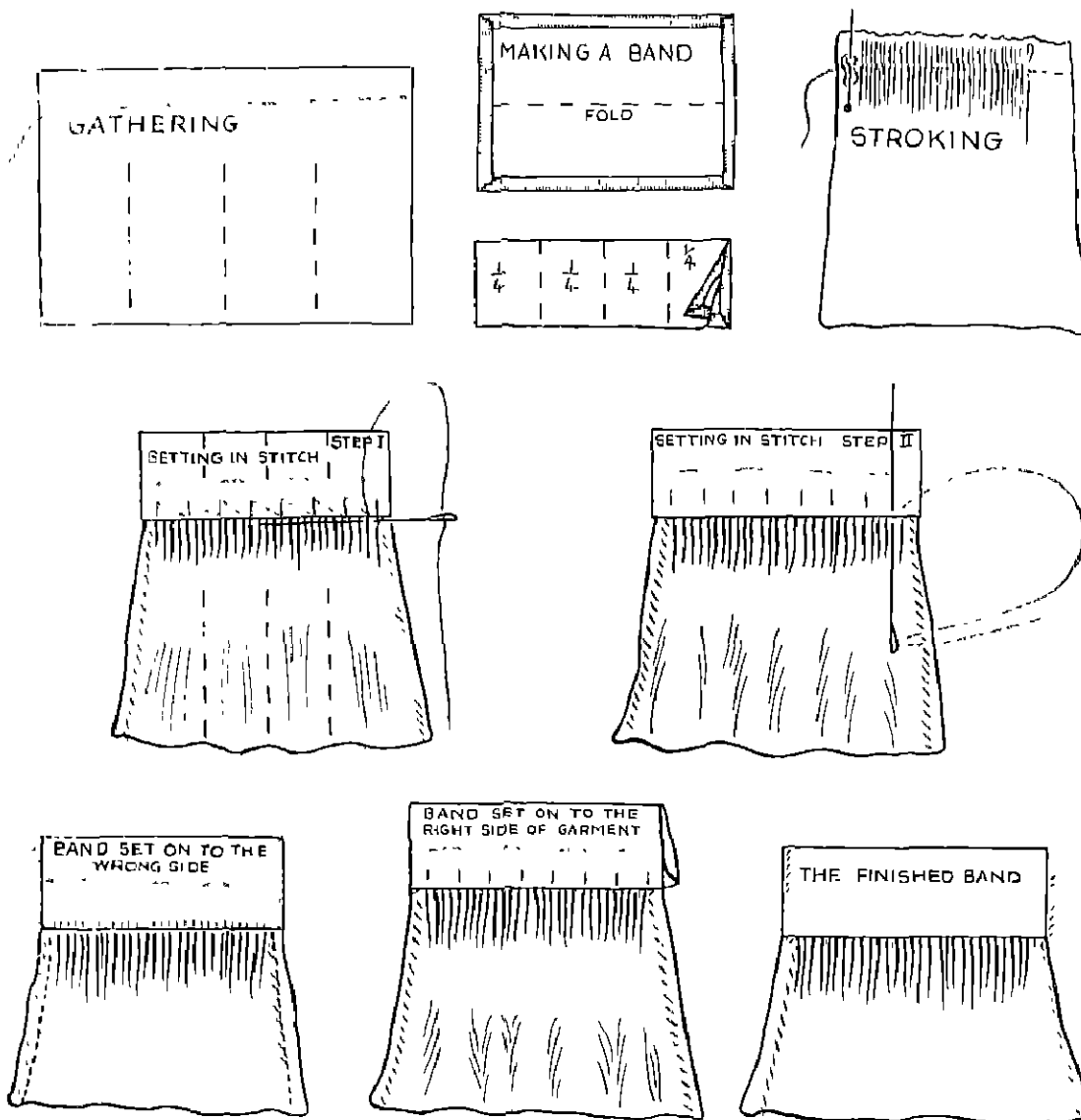
FIG. 13
Setting on a Band

Fold along the length of the band so that the two selvedge folds come together, and tack through the centre line (see Fig. 13). Divide the band into quarters and mark with vertical lines of tacking.

Gathering and stroking the material before setting into the band. Mark the quarters of the material with pins or tacking threads. Gather

|ST CREASE   2ND CREASE   3RD CREASE

FIG. 14
Setting on Tapes

round and stroke the material above the gathering thread. When the stroking is finished, let out the gathering thread

Fixing a Band. Set the band on to the right side of the garment. Pin the quarter marks of the band to the quarter marks of the gathered material Draw up the gathers to the size of the band and arrange the fullness equally along the

TAPE LOOP FOR TOWEL

FIG 15

band between the pins Tack into place with the upright tacking stitch (Fig 2).

The setting-in stitch for gathers. Each stitch should have its own tuck.

Start as for hemming and hem the plain part. When the gathering is reached, place the needle through the first gather, parallel to the edge of the band, turn the needle round so that the eye points directly away from the band and the point is ready for making the first setting-in stitch at the extreme edge of the band Draw the needle through, and work the next stitch in exactly the same way. Continue the stitch along the length of the gathers

Set in the back by placing the fold of the band to the gathering line, tack into place Seam up one end of the band from the right side, then turn to the wrong side and set in the gathers as on the front, taking care that the stitches do

along the length of the material ¼ in. in from the edge. Place a pin where the gathering finishes, draw up the gathering thread tightly and wrap it round the pin. Hold the material between the left thumb and forefinger, keeping the gathering thread above the finger. Hold the needle firmly with the right hand, place it in each gather and gently draw up each tuck. Place the tuck between the left thumb and forefinger, and press with the thumb. Continue this process along the length until all the gathers are stroked below the gathering thread. Turn the work

not show on the right side, turn the work round and seam up the other end of the band on the right side.

Setting on Tapes

Method of Working. Fold a narrow turn on to the right side at one end of the tape. Hold the tape with the turning away from the worker. Fold the tape to form a triangle as in Fig 14, and crease well. Press back the edge of the tape that crosses the width to form a square as in diagram. Place the crease of the square to the wrong side of the garment and seam holding the garment towards the worker, then turn to the wrong side and hem round the square of tape to
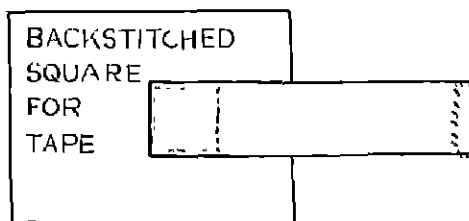
FIG 16

finish. Fix a narrow hem at the other end of the tape. Seam up the ends and hem along the width of the tape.

Back-stitched Square for Tape

Method of Working. Crease as before. Fix the tape on to the right side of the garment or the band, the width of the wrap in from the edge of the band, e.g. 1 in. or more as required. Back stitch round the square to finish. Fix a narrow hem at the end of the tape. Seam up the ends and hem along the width of the tape.

Tape Loop for Towel

Method of Working Cut the tape twice the length of the loop desired. Crease each end of the tape as before. Place the two ends of the tape together with the turnings to face each other. Seam together along the selvedge edges of the tape for the length of the square (see Fig 15). Press open the seaming with the
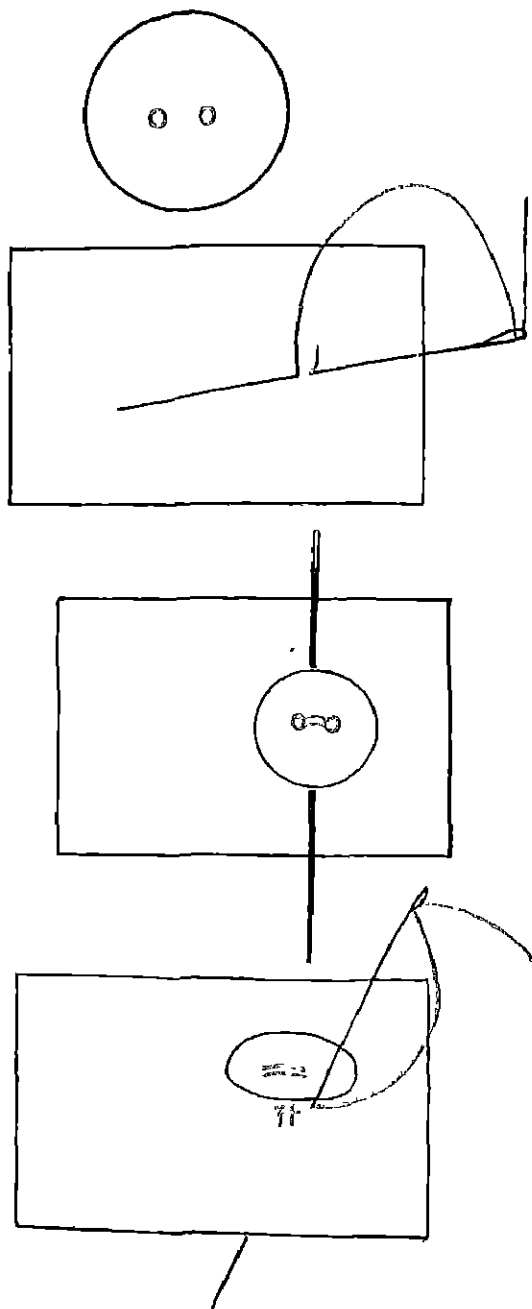
FIG. 17
Sewing on Buttons which have Special Holes

finger and thumb. Set the crease line of the two squares to the edge of the towel and seam across, holding the towel towards the worker. Turn to the wrong side, and hem round the oblong of tape to finish.

Sewing on Linen Buttons

Linen buttons are suitable for using on under-garments and household linen. There are two types of linen buttons; one type has metal holes to sew through, and the other type is unpierced.

Buttons with Metal Holes

To Sew on the Button. Make a back stitch on the right side of the garment, or band, just where the centre of the button will be. Place a fine bodkin under the button to raise the button from the garment. Sew on the button through the holes (see Fig. 17). Remove the bodkin, and bring the needle out between the button and the garment. Wrap the cotton three times round the sewing-on stitches to make a small stand. Pass the needle to the wrong side of the garment and fasten off with a back stitch.
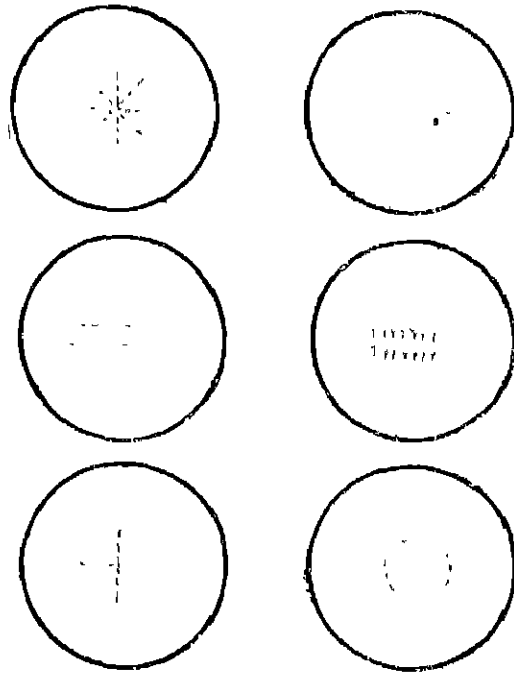
FIG. 18

Sewing on Plain Linen Buttons
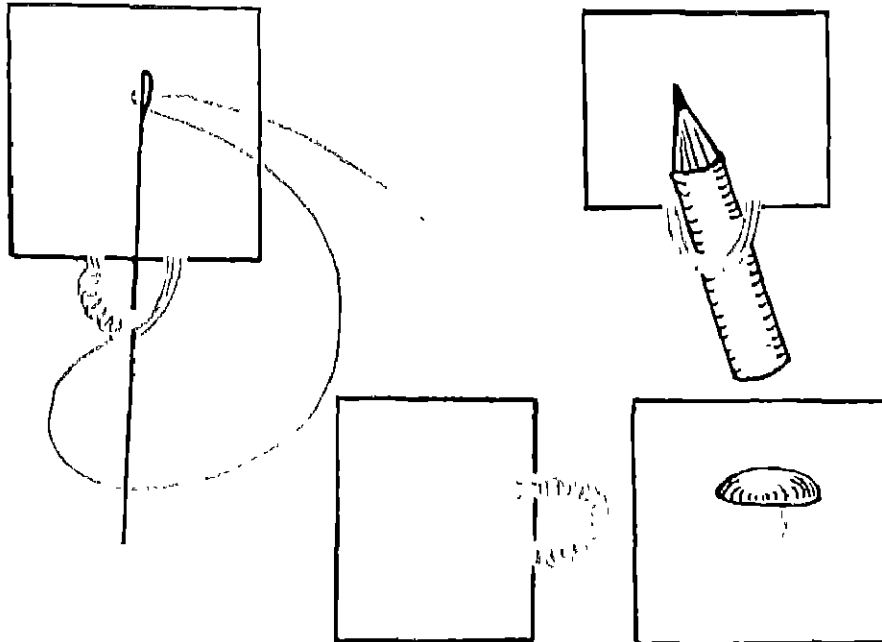
FIG. 19

Button and Loop

Linen Buttons without Holes

These buttons are generally sewn on by back stitching in the following shapes—
1. A star.
2. An ellipse.
3. Two parallel lines.
4. Two bar loops.
5. A cross.
6. A circle.

The back stitching in each case covers one-third of the diameter of the button (Fig. 18).

To Sew on the Button. Make a back stitch on the right side of the garment or band just where the centre of the button will be. Place a fine bodkin under the button to raise the button from the garment. Sew on the button using the desired back stitching shape. Remove the bod-kin. Pass the needle through to the wrong side of the garment, and fasten off with a back stitch.

Loop for Button

Worked loops may be used for fastening purposes where button-holes are not practical.

Method of Working. Make a back stitch to fasten on, make a loop of thread large enough to admit the button. Hold a pencil through the loop and make three additional loops over the pencil. Withdraw the pencil and work loop stitching over the four threads. Keep the pull edge of the loop stitching to the outer edge of the loop. Fasten off securely with two back stitches (see Fig. 19).

Worked with coloured silk these loops may be

FOLD

STRENGTHENING TAPE

FOLD

TAPE COMPLETE ON THE WRONG SIDE

SHOWING THE HEMS TACKED
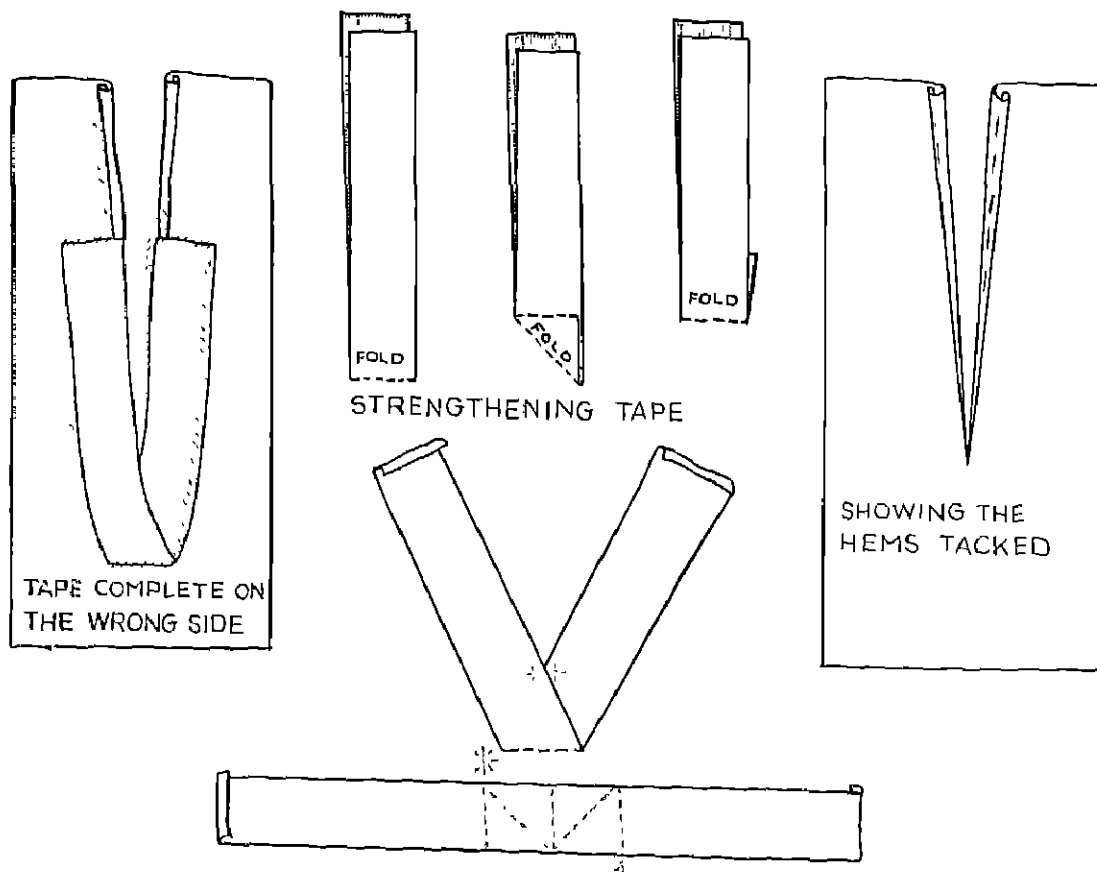
FIG. 20

included in the decorative scheme of the garment, e.g. fastening the front opening of a dress.

Strengthening Tape

A strengthening tape may be placed in garments at the ends of a seam or opening to strengthen any part where there is strain or likelihood of tearing.

Method of Working. Fold and tack a narrow hem at each side of the opening on to the wrong side of the garment, tapering it towards the end of the opening. Cut a length of tape 4 in. long. Crease the tape as in Fig. 20. Place the V of the tape to the lower part of the opening, fixing the edge of the tape just to the fold edge of the opening. Turn a narrow fold on to each end of the tape. Seam the edges of the tape and the
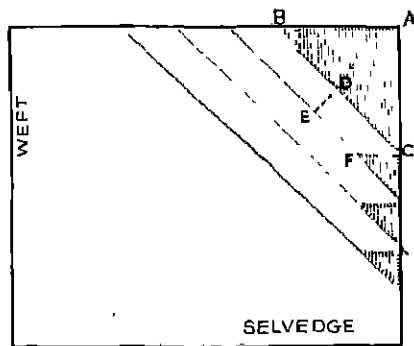
CUTTING AND JOINING
MATERIAL ON THE CROSS
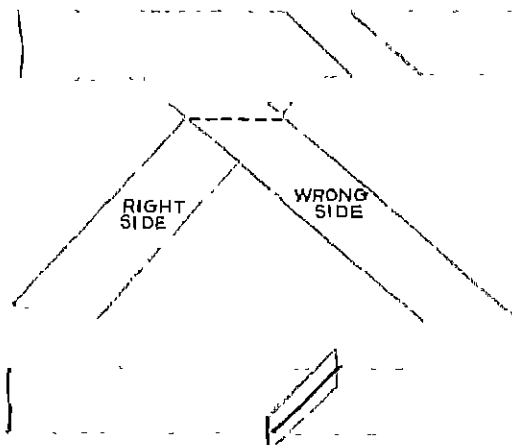
FIG. 22
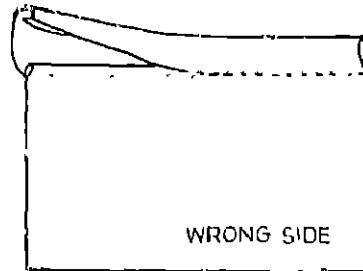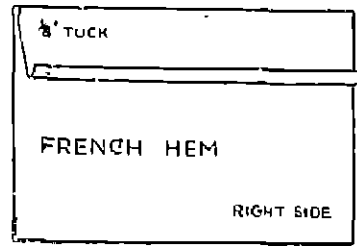
FIG. 21

opening together. Hem round the outer edge of the tape. Work button-hole stitching around the edge of the V to strengthen, as in diagram

A French Hem

A French hem, which when worked gives the appearance of a binding, is used to finish the lower edges of a garment.

Method of Working. Fold and tack a ¼ in turn on the right side of the garment. Run stitch a tuck ⅛ in. wide from the edge of the fold. Turn and tack a single fold ⅛ in. wide on to the wrong side of the material. Fix this fold edge to the stitching of the tuck and tack into position. Hem just above the running stitches.

Cutting and Joining Material on the Cross

Material cut on the cross is cut to follow neither the warp nor the weft threads, but diagonally between them

The Warp or Selvedge are the strong threads running along the length of the piece.

The Weft threads, not quite so strong, are the threads that are woven in and out the warp threads, across the piece from selvedge to selvedge.

This process of weaving threads produces the Web or the material.

To Cut Material on the Cross

Mark the corner A, as in Fig. 22.

A to B equals A to C.

Cut from B to C to produce crossway material.

Measure at right angles to the cut edge, the

WRONG SIDE

WRONG SIDE

BINDING A CONCAVE CURVE

BINDING
A CONVEX
CURVE
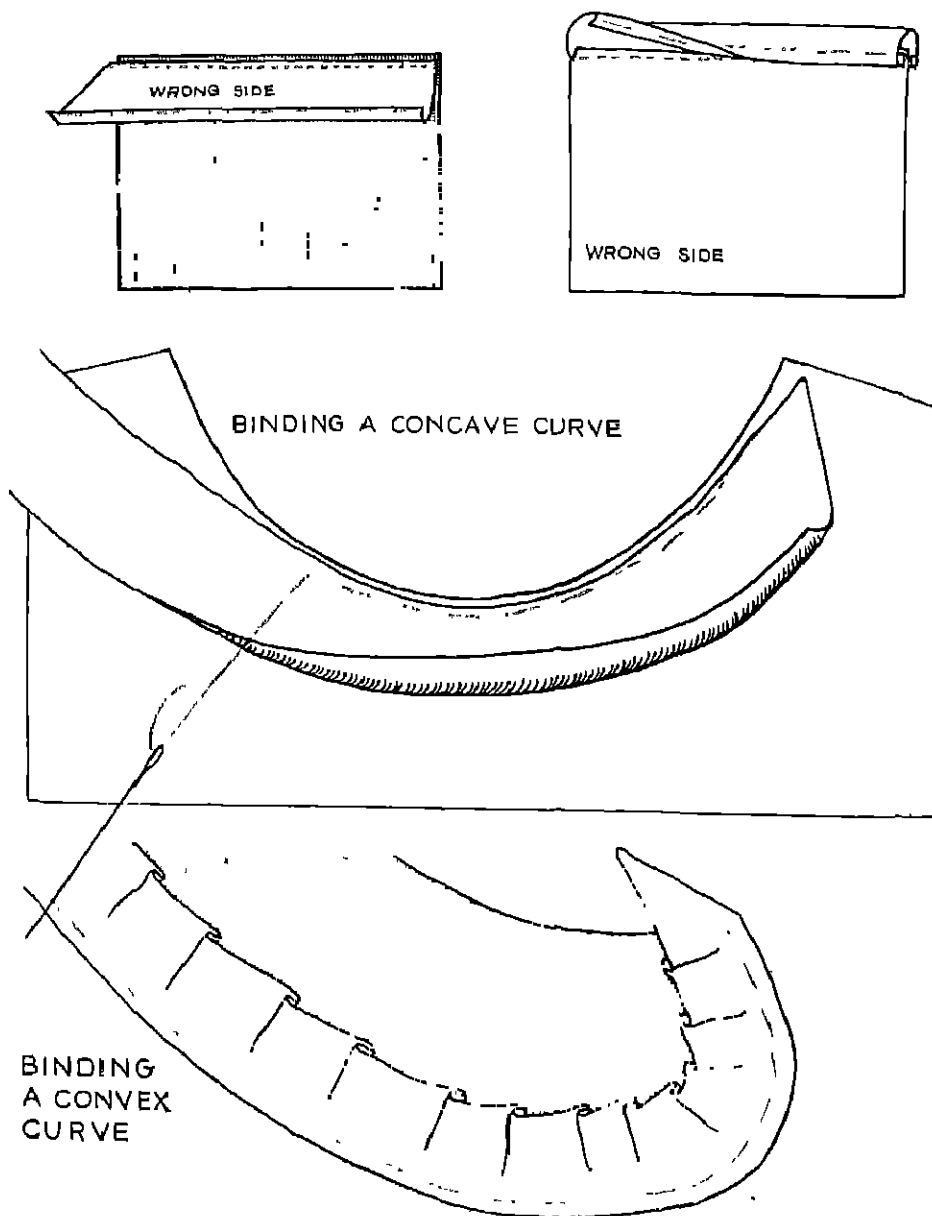
FIG. 23

of the strip required, as line D to E on the
m.

he material is twilled, the twill must run
gh the width of the strip.

line C to F is at right angles to the Weft
of the material to give the correct angle
ning the strips together.

rays join crossway strips along the selvedge
f the material (see diagram).

ss cut material is suitable for trimming or
ring purposes.

sway Trimmings

ng

the word suggests, the raw edges to be
l are enclosed in the added binding.
thod of Working. Cut a strip of material,
e cross, twice the width of the finished
ng plus two turnings.

ce the right side of the strip to the right
f the garment and pin into position. Tack
ep the two edges together. Run stitch or
ne $\frac{1}{8}$ in. from the raw edges (Fig. 23).

Make a fold $\frac{1}{8}$ in. wide on to the wrong side of
the binding, and tack through this fold to keep
it in position

Turn the binding over to the wrong side of
the garment, fix the fold edge of the binding to
the stitching line and tack into position. Hem
neatly, taking care not to let the stitches show
through on to the right side of the garment.
When finished the binding has a similar appear-
ance on both sides of the garment.

Setting a Crossway Binding round a Curved Edge

Concave Curve. E g. neck edge of the garment.
The fold edge of the binding, when finished,
is actually smaller than the setting-on edge,
therefore, to make the binding fit, it must be
slightly strained or stretched when applying (see
Fig. 23)

Convex Curves. E g Peter Pan Collar The
fold of the binding, when finished, is actually
larger than the setting-on edge, therefore, to
make the binding fit, it must be slightly eased
when applying (see diagram).

REPAIRING GARMENTS

hing

atch is a piece of material which is applied
garment to replace the section of the gar-
which is worn out

the patching use material as much like
riginal garment in colour and texture as it
sible to obtain, but avoiding new unwashed
ial.

patch must cover all the weak material
surrounds the actual hole. The patch
be set on with the selvedge way of the
to follow the selvedge way of the garment.
thod of Working Patch for Calico or Cambric
ent. Cut the piece of material to form the
the required size. Lay the right side of the
to face the wrong side of the garment and
to position. Fold a narrow turn on to the
g side all round the edges of the patch
the patch carefully into position. Hem
the edges of the patch. Turn to the right
f the garment. Mark a turning with pins
wide away from the hemming. Cut the

worn part of the garment away leaving the
turning $\frac{3}{8}$ in. wide, as indicated in Fig. 24.

Make a snip at each corner of the hole as in
diagram

Fold a $\frac{1}{8}$ in turning on to the wrong side and
tack into position through the patch. The
worker should hold the patch toward herself
and seam round the edges to finish.

Method of Working Patch for Patterned Material

When mending patterned garments the most
important point to consider is the matching of
the design.

If the pattern is carefully matched the repair
will be almost invisible

Method of Working Place the piece of mate-
rial for the patch with the wrong side of the
material to the right side of the garment Match
the pattern carefully over the worn-out part of
the garment, and mark off the required size for

the patch. Cut the patch to the required size and pin into position. Fold a single turn ⅜ in wide on to the wrong side of the two selvedge sides of the patch. Fold a single turn ⅜ in. wide on to the two weft sides of the patch. Tack the patch round the four sides to keep it in position. Holding the patch toward herself, the worker should seam round the four edges. Flatten out the seaming with the finger and thumb. Turn to the wrong side and mark off with pins a turning ⅜ in. away from the seaming. Cut away the worn part by these pins.

Loop stitch the two turnings together on the wrong side of the garment

Darning

The old saying "A stitch in time saves nine"

FIG. 24

FIG. 26

Pinafore made from Worn Print Frock
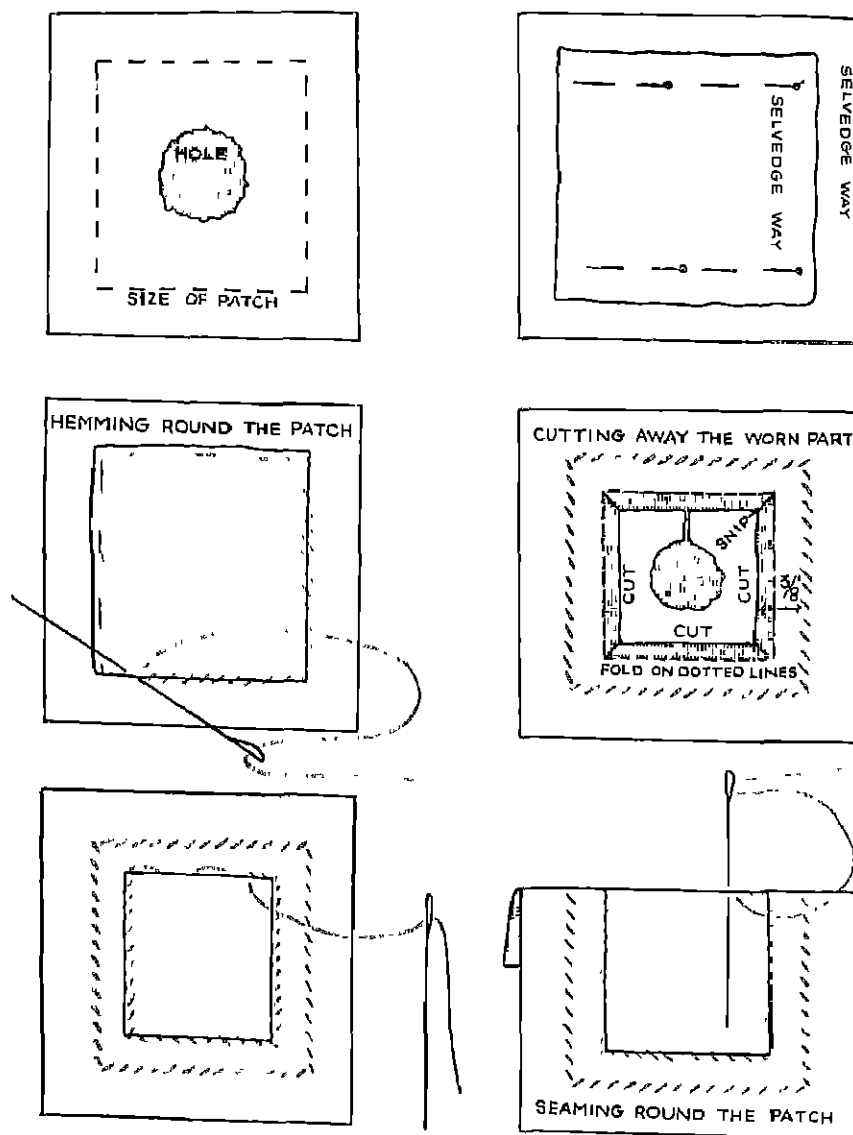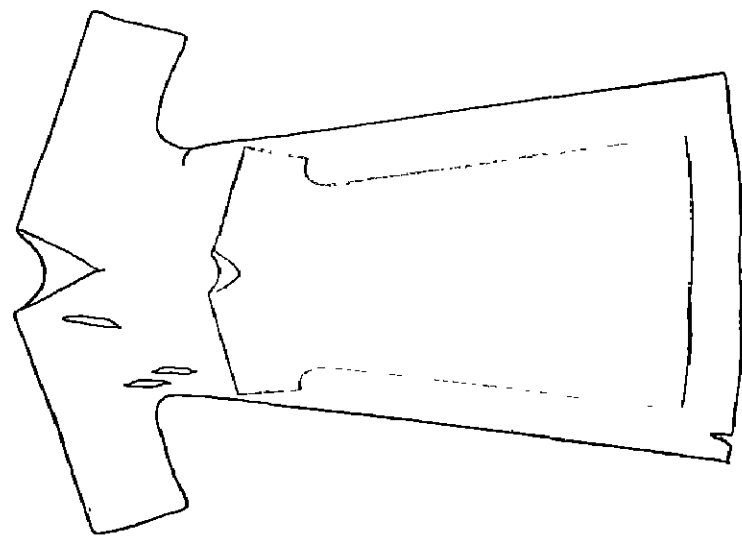
FIG. 25

Thrift Garment - Child's Nightgown

is still worth remembering. It is essential that the darning is worked to cover a greater area than the actual thin place or hole.

Darning a Thin Place

A thin place often occurs in garments and hosiery and this can be strengthened by darning it on the wrong side with a thread of the same texture.

Method of Working. Begin the darn at the lower left hand corner, and work parallel to the selvedge way of the material, so as to strengthen the threads which bear the most strain.

When darning fine materials take up two threads and pass over the same number, but when darning coarse material take up one thread and pass over one thread.

The darn must extend $\frac{1}{2}$ in. to $\frac{3}{4}$ in. outside

the thin place, and can be any shape, according to the shape of the thin place.
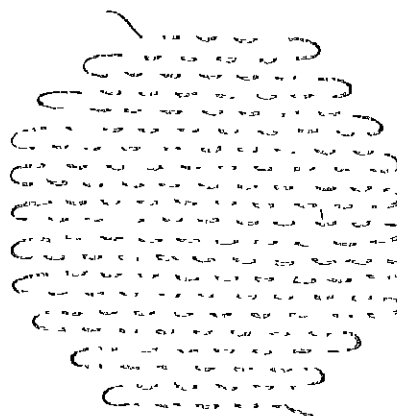
FIG. 27
Darning a Thin Place

THRIFT GARMENTS

The following projects may be carried out with garments which have been in use, but which are not altogether worn out.

Child's Nightgown

A child's nightgown made from the skirt section of a well-worn, full size nightgown.

Draft the Magyar pattern to the required size according to instructions given in the pattern making section, page 1183, but extend length as required.

Plan out the pattern on to the garment (Fig. 25).

Pin on the pattern and cut out the garment allowing $\frac{1}{2}$ in. turnings on all seams and $1\frac{1}{4}$ in. for the hem.

Join the shoulders with a run-and-fell seam.

Cut the front opening to the required depth and finish it with a false hem and false piece. Finish the neck edge with a crossway binding.

Join up the under-arm seams with narrow french seams.

Finish the edges of the sleeves with a crossway binding to correspond with the neck edge. Fold and tack a 1 in. hem on to the lower edge of the garment. Hem round to finish.

The processes involved in making this garment have already been described.

Pinafore Made from a Print Frock

A frock which is too small or faded may be used to make this garment

Unpick the hem and under-arm seams.

Iron out the creases

Fold the dress down the centre front and back and pin the two halves together (see Fig. 26).

A to *B* equals 2 in.

C to *D* equals 1 in.

E to *F* equals 3 in. or the desired width of the shoulder.

Rule a line from *F* to *G* and from *F* to *H*.

F to *I* equals $\frac{1}{2}$ in.

I to *J* equals 2 in.

I to *K* equals 2 in.

Curve from *J* through *I* to *K*.

Cut out the pinafore round the new pattern lines.

Take out the pins.

Bind round the outside edge of the pinafore and the neck with bias binding of a contrasting colour to the garment.

From the cuttings left over cut four strings and attach to the pinafore as indicated in diagram.

PRACTICAL NEEDLEWORK PROJECTS

THE new Junior Schools emerging from the reorganization following the Hadow Report present certain problems The school must reach a definite standard, without restricting freedom. Between the ages of 7 and 11 years the child's mind has to evolve from the subconscious learning through play, which has been the basis of its Infants' School work, to a conscious acquisition of learning, in preparation for work in the Secondary School. Go slowly, teach little, and teach that little well. A child has to be taught to learn and to use her power of concentration.

Principles of Needlework Teaching

The true needlework teacher will combine her subject with history, geography, and art. The power to produce something beautiful with the needle and thread has been handed down to us from the early ages of man, and had it not been for the needle much of the history which we have to-day would not have been recorded.

What can be done with children of seven who come from the playground of the Nursery Schools with open minds prepared to receive information? Interest must be aroused and maintained, the play work of the Infants' School left behind. Construction and decoration will serve a very useful purpose in the right place, but the true needlework teacher will know when this purpose has justified itself It is important to select suitable work and materials which will not strain the eyes or nerves A real foundation for good work must now be laid, and children should be taught as a first principle that seams must be as invisible as possible Therefore decoration of seams will not at the later Junior stages fulfil the purpose

Create in the children a desire for knowledge, the joy of work well done, and a love of what is beautiful, and you have paved the way for the University of the Future.

Some History Worth Studying

Teachers will find the following list of needlework through the ages a most interesting study Books can be got on all these subjects, and early pieces of work seen at various places.

The history of tapestry
    „   „   „ weaving
    „   „   „ ecclesiastical embroidery.
    „   „   „ smocks
    „   „   „ shawls.
    „   „   „ quilting.
    „   „   „ samplers.
    „   „   „ dress.
    „   „   „ lace.
    „   „   „ needles

The unspoken history of banners may be seen hanging in our old cathedrals and churches, York Minster, and so on. The more one studies the subject so much more one is thrilled by the depth and far-reaching influence of the needle.

Classroom Necessities

A classroom for needlework teaching should have cutting-out tables, chairs, and desks of a suitable height for comfortable sitting; a large cupboard with shelves and drawers; a good window light, and good artificial light without glare, and sewing machines (if available) in a convenient position for lifting

Scheme of Work

The following scheme is graded according to age, as the grading of classes varies in different schools.

Stage I	. Grade 1	Age 7 years
Stage II	. Grade 1	Age 8 years
Stage III	. Grade II	Age 8 to 9 years.
Stage IV	Grade III	Age 9 to 11 years

THE YEAR'S WORK: STAGE I, AGE 7 YEARS

Introduction to Pattern Making

The children will be taught to hold and use a ruler, the necessary care in ruling, and the test of a straight line, a square, and a circle.

A whole lesson will be well spent if accurate drawing of geometrical shapes only is taken, it is well worth while to make a good foundation, which will save time later on.

Accuracy must be taught and insisted upon; it is seldom found in children of this age, though

FIG. I
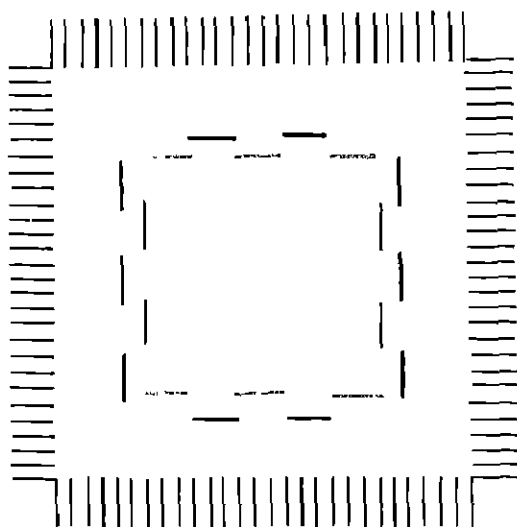
Mat. Stage I

Size 6 in. square
To teach cutting a square and fringing the edges
Design Tacking stitch in two colours, using Clark's embroidery cotton.

very small children are, as a rule, very accurate. This is noticeable in the way tiny ones place their toys, and if moved return them to their original position The early training in the Nursery and Infants' Schools is particularly valuable in turning this early, but easily lost, aptitude into a habit

Children's Work

Material. Coloured linen or coarse soft Holland

Article. Mats fringed all round,
Size 6 in. *Shape* square
Stitch. Tacking

The mats should be the property of the children when finished.

Teaching

Warp and weft threads—right and wrong sides.

Folding to form a square

Teaching Equipment

Two large squares of coloured paper, one mounted on brown paper, the other for folding before the class.

Square of Hessian to teach fringing and tacking. Coloured wool.

Later Work : Clothing and Health

Very simple lessons on clothing, and what clothes to wear, in winter and in summer, may now be given. Further lessons on the subject of clothing and health will be taken later on, or the needlework mistress may in some cases co-operate with the mistress in charge of the physical training At present only the following points need be dealt with In winter warm clothes are worn, and the reason for wearing wool. The very simple process of wool taken from the growth on the sheep's back to the natural (flannel) In summer cooler clothes are worn, the reason for using cotton.

The cotton plant may be shown and simply described; the process from the plant to the material calico shown.

Clothing should be loose, light in weight, and have no tight elastic. The reasons explained. Materials should be porous, to allow free air passage.

Children may also be taught that the head and eyes must be protected from the hot sun.

Children of this age are quite often left in charge of younger sisters and brothers, and these lessons are essentially practical. (See also "Hygiene and Health," page 1324)

Dressing a Doll

The children are shown a doll which is to be dressed by them and kept in the school afterwards.

Suitable Clothing for Winter

Vest or Combinations.
Knickers.
Liberty Bodice
Woollen Dress or Tunic and Blouse.

Summer Clothing

Vest (Thin Wool).
Liberty Bodice (Cotton).
Dress and Knickers.

"Suitable clothing" should be written on the blackboard.

In this way the class will become familiar with it

The blouse and tunic are too difficult for this class, though they are the most suitable for school wear; the woollen dress can be substituted

The children should be taught that a special stitch is used for sewing flannel seams; this they will learn later on. At present the tacking stitch will be used, and the doll's garments will all be cut from a square or oblong, from very simple paper-folding patterns The children measure the doll.

Taking the Measurements

Vest — All round under the arms.
The length from shoulder to hip.

Knickers — The waist
The length of leg from waist to knee joint

The Dolls

Two good English dolls should be kept in school. The cost is about 5s 6d each. English dolls with kid bodies and movable joints are best, and the shape much better than the foreign makes, which nearly always have ugly proportions.

Where expense must be considered, a good doll can be made from a stocking; use a flesh-coloured one, work the eyelashes in silk, and the hair in silk or rug wool; the eyes can be bought at any dolls' hospital, and the cheeks coloured with water-paint.

DOLLS' CLOTHING

PAPER FOLDING PATTERNS

VEST
6"x 5"
FOLD

KNICKERS
6"x 4"
FOLD
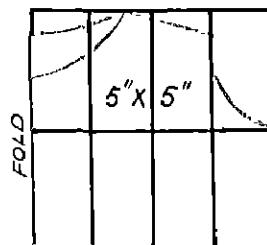
LIBERTY BODICE
5"x 5"
FOLD

MAGYAR DRESS
12"x 7"
FOLD

TAKING THE MEASURES
LENGTH FROM SHOULDER TO SEAT ————— 6"

LENGTH FROM WAIST TO KNEE ————— 6"

BUST ALL ROUND UNDER THE ARMS ———— 10"

WAIST ————— 8"

FIG. 2

THE YEAR'S WORK : STAGE II, AGE 8 YEARS

At this stage, having mastered holding and tacking on single material, children are taught the following stitches

Hemming. How to fix a hem, hold the work, and form a proper hemming stitch. It is not easy to teach hemming, and requires care and great patience on the part of the teacher, and continual practice on the part of the pupils before any good work can be done. Stitch direction begins its foundation.

The hem on the square handkerchief must be mastered before the curved hem at the neck of the feeder is taught

Seaming. Ends of hems, squares folded to form bags, and pillow cases for doll's bed. In teaching seaming it is necessary to take care that the beginning and ending off are always done correctly.

Tacking stitch : Used in simple designs, children choosing their own colour schemes.

Children's Work

Handkerchief, 10 in square of coloured lawn.
Feeder, simple bag, doll's bed (from a small cardboard box), and bed-clothes.

*N B —*The doll's bed-clothes give good practice in hemming and seaming. The bag and bed-cover, tacking stitch as decoration.

Teaching Equipment

Large square of material with hem fixed and tacked ; square of calico to fix hem before class.
Coloured cottons and wool to demonstrate stitch.

THE YEAR'S WORK : STAGE III, AGE 8–9 YEARS

These children have already been taught how to cut and measure simple shapes accurately; they are now to measure, cut out, and make a simple garment to fit themselves.

Making a Pinafore

Any simple shape may be taken.

The one given in Fig. 7 is very easy to cut, takes very little material, is pretty when made up, and affords very good practice in stitchery. The pattern can be drafted, if necessary, on the desks

The children should measure one another after their attention has been drawn to the diagram and finished garment, which will be shown on one of the children.

Stitches. Blanket stitch, chain stitch, herringbone stitch.

These new stitches, also hemming, can be practised on the doll's bed-clothes, using small pieces of flannel for blankets—one herringboned, one blanket-stitched.

Teaching Equipment

Full-sized pattern of pinafore mounted on brown paper.
Pattern placed on material.
Pinafore made and embroidered in a good simple design and colour scheme.
Diagram of stitches, and a sampler.

Cutting Out

The diagram of pattern placed on material will be shown and explained to the class.

Small-sized patterns of pinafore to fit a doll may with advantage be cut, placed on material, and cut out before the children cut their own pinafores. These small pinafores can be taken home and made there, following the lessons and work done at school. Children love to take work home, but it is not advisable to allow them to take their school work at this stage They should be encouraged to bring their finished home-work for the teacher to see.
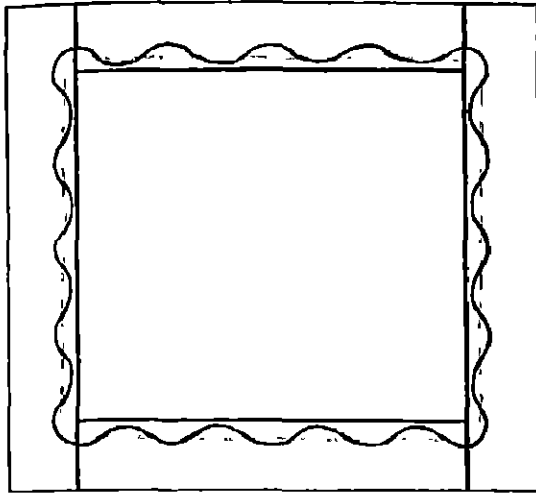
FIG, 3

Handkerchief. Stage II

Size 6 in. square.
To teach the making of a hem and fixing a corner.
Design. Tacking and weaving in two colours.

13″ X 5″
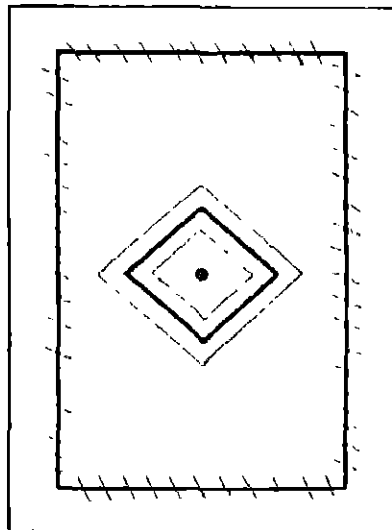
FIG, 4
Child's Feeder

FIG, 5

Doll's Bed Cover

Size 1 in. larger than box To teach further practice in hemming
Simple embroidery stitches.
Design. Hem a square, using two colours

Hem ½″   *Turn in and seam*

Size of Book

Fold

Narrow Hem

Hem ½″   *Turn in and seam*
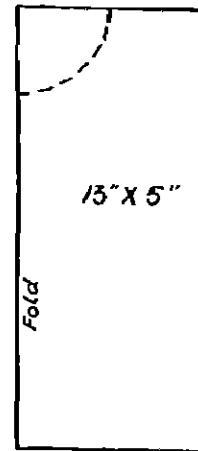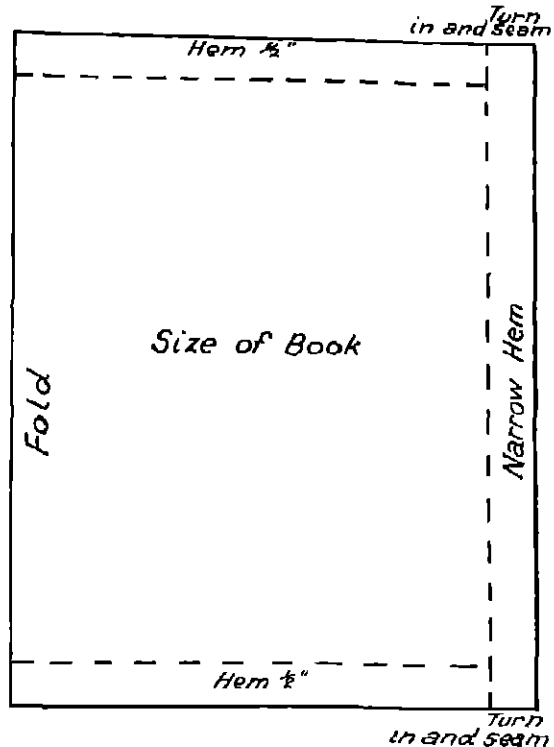
FIG 6

A Book Cover

Measure the book all round, including the thickness
Leave turnings for hem and inside wrap as shown in the diagram.

A book cover will be found a most useful piece of work It will fill a want in almost any form, it can be very simple for young children, or much more complicated, according to the design It may also form a sampler of stitches, and gives excellent practice in the working out of designs

The doll's bed-clothes and coverings will be found excellent practice for the various stitches,

FIG. 7

Pinafore

Material If it is to be embroidered a good plain material is the most suitable—Holland, Lawnie, Linen A checked Zephyr will work well in a cross-stitch design in a colour contrast.

Quantity ½ yd. of 40 in. width for this size

and these can be made during the cutting out, which will probably take two or three lessons, according to the number in the class. The actual sewing of the pinafores is better all started together, after a lesson has been given on keeping work clean, using a thimble, and folding and putting work away.

Correct Position for Sewing

When the actual sewing begins, the teacher will see that every girl holds her work properly and is sitting straight, with her back well up to the form or chair, as stooping over work is bad. There are always some children who are inclined to stoop. It causes eye strain and headache, and must be guarded against. A proper sitting position is half the battle when sewing.

Correlation with History and Geography

From this stage needlework may be taught in correlation with history and geography.

Geography. The countries from which the raw materials come, cotton, wool, flax, their growth, climate, methods of conveyance, manufacture, the various processes each goes through, etc

History Dress through the ages, trimmings, fastenings, sewing material, how they came into use, pins, needles, buttons, style of dress influenced by work, pleasure, etc., origin of dress. Uniform—a special dress as worn by people holding various degrees, etc. The children will have noticed many different forms of dress worn for special occasions, the history and origin of which make an interesting study.

The introduction of these and similar points of interest into the lesson awakens a new, virile interest in needlework.

TWO YEARS' WORK : STAGE IV, AGE 9–11 YEARS

As the muscular development of the eye is taking place the habit of observation is being formed. The child's growing power of concentration must be used. It will be found at this

FIG. 8

A Work Bag

Materials Unbleached calico or crash linen, and a coat hanger with a straight bar

Making. Trace design and work on the front of the bag,

Bind the top front edge with braid in a colour to tone with embroidery Turn the under top edge over hanger and tack firmly

Turn edges, and seam with coloured thread

Blanket stitch instead of seaming may be used round the edge The edge finishing depends upon the design chosen

stage that children grow very interested in pattern making, especially when needlework is taught in correlation with art.

The teaching will now include further pattern making, making garments to fit various parts of the body, taking the necessary measurements, the use of these for the various parts of the pattern. The necessary accuracy in taking and using these measures must be insisted on.

Stitches Running, gathering, buttonhole stitch, darning, making a seam, simple repairs.

Children's Projects

Drafting a pattern for a simple bodice and sleeve, the pattern adapted to cut a petticoat.
A Magyar nightdress.
A blouse.
A pinafore dress.

Making a work bag and a tea cosy.
Mending everyday garments, darning stockings

Teaching Equipment

Large-size diagrams of bodice, and bodice adapted to cutting the other garments.
Simple designs for a work bag.
Simple designs for a tea cosy
Simple designs for borders worked on a sampler

Note The children make their own designs - the teacher showing what can be done.

Essentials for Success in Teaching Needlework

It is the teacher's outlook which will determine the work of the class.

Work for show purposes serves no useful end, a thorough grounding is what really matters, a little work well done is much better than a cupboard full of indifferent garments of poor shape and workmanship

Needlework is not an easy subject to teach, and cannot be undertaken without much thought and preparation. Classes of twenty to twenty-five are quite large enough Deplorable results so often seen may be in no way the fault of the teacher, but unsuitable classrooms and impossible sitting and table accommodation are slowly but surely vanishing, and the new arrangements of Junior and Modern Schools must tend to make an improvement

A teacher should be allowed surplus material of a suitable quality for experimental purposes

FIG. 9

Purse Bag

BLOUSE PATTERN
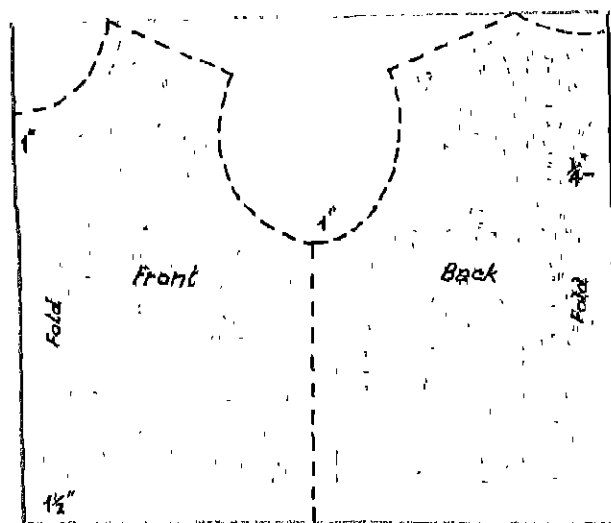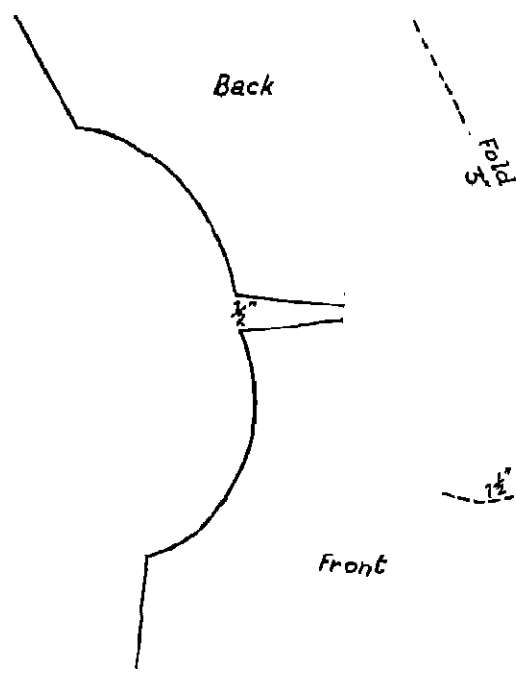
Making the Blouse and Collar Patterns from Bodice

The blouse is cut from the pattern (see page 1177) as placed in Fig 10, allowing extra width and length as shown

Collar. Patterns of back and front are placed to touch at the neck, then opened ½ in. at the shoulder The collar pattern is then made as shown in Fig 11.

FIG 10

Back

Front

FIG. 11

Sleeve

FIG. 12
Sleeve Pattern

Back
Front

1" 1"

Fold

Length 26"

14"
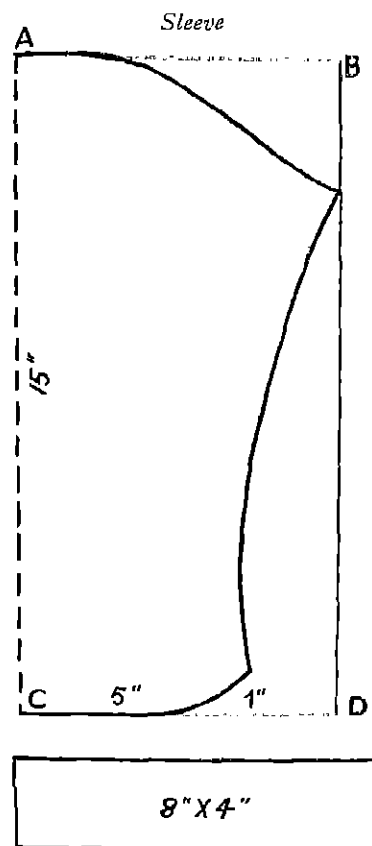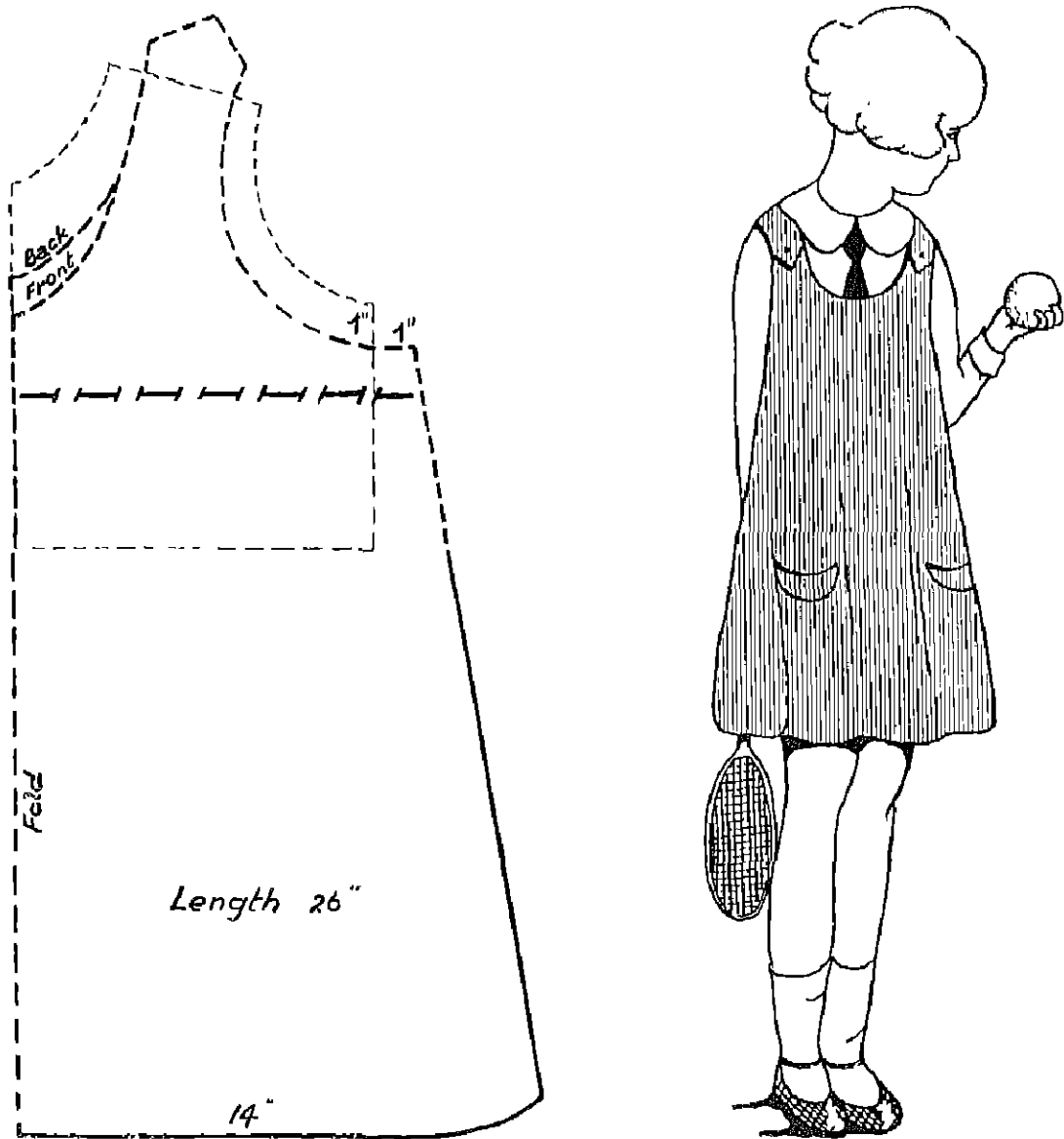
Fig 13

Pinafore Dress

Quantity of Material 1½ yd, 30 in wide
Suitable Materials Horrockses cotton, serge, linen, or casement cloth
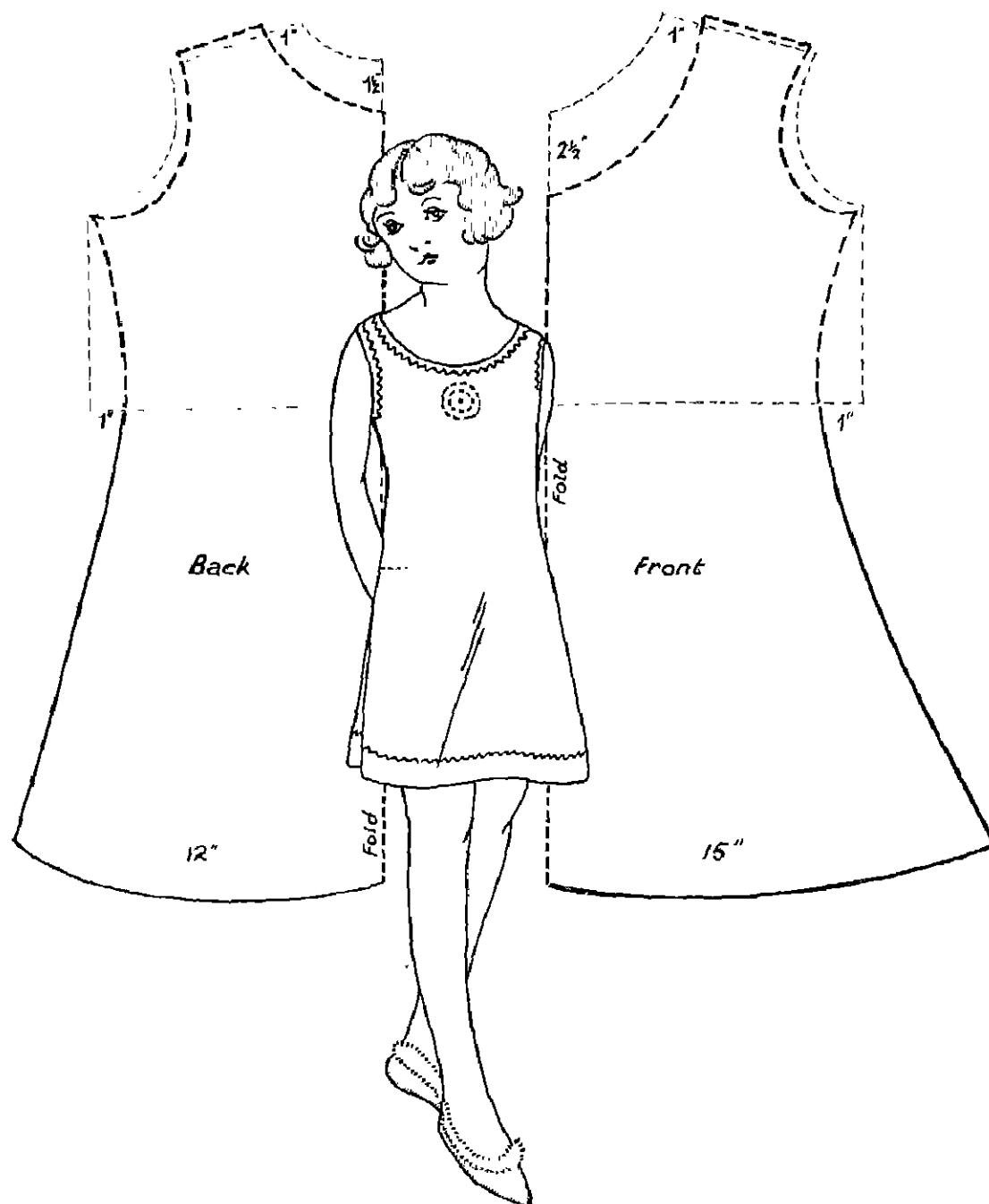
FIG. 14

Princess Petticoat (Stage IV)

Cut from bodice pattern with new full skirt, and fitting bodice
This shape may be adapted and used for any class in a school.

FIG. 16

Child's Dress Cut from Bodice Pattern

Measure. The length taken from the shoulder

A simple method of cutting a child's dress from the bodice pattern

The dress is gathered into the yoke leaving 4 in plain in the centre of back and of front. This fullness may be honey combed: it gives sufficient scope for a beginner, and is not so much work that a child will tire of it.

FIG. 15

Magyar Nightdress

Quantity of Material. Twice the length
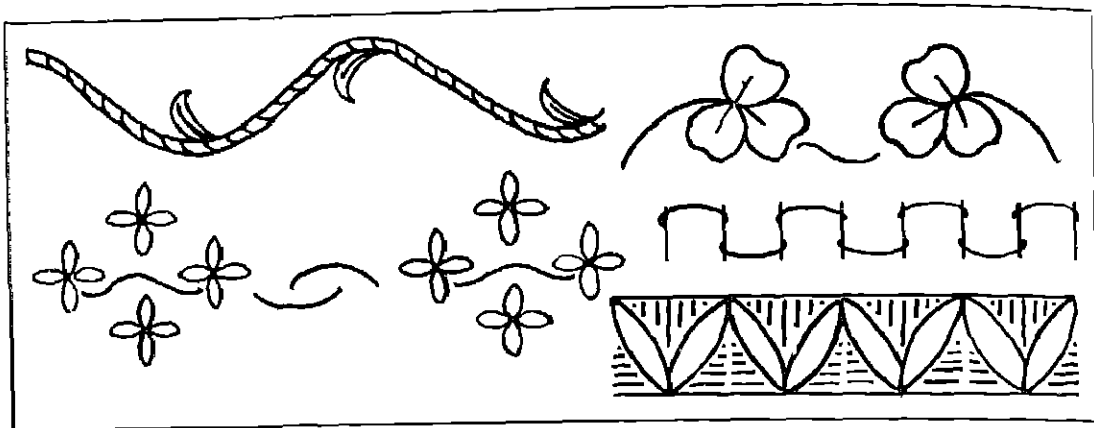
NEEDLEWORK IN CORRELATION WITH ART TEACHING

IT is impossible to draw a dividing line between needlework and art. The true needlework teacher must be an artist, and the art teacher must know the various ground materials, stitches, etc., which will be used to work out the design, just as in a building the architect and builder work together.

The reason why needlework and art are so often spoken of as separate subjects is, perhaps, that each is taken by a different teacher, though it is quite possible to correlate—the difference is only in the method of working out a design, one with pencil and paper, the other with needle and thread. "Mind before matter."

Teaching Design

The early foundation of design is laid in the Nursery School, when children draw with coloured chalks. Too much cannot be expected from children of this age; a teacher is sometimes disappointed with the results of her work, and forgets that the foundation is what really matters. Be content with a little work well done—a simple design worked out in one or two stitches, not more, and these well worked in a good colour scheme. Teach very simple pattern designing from lines, and the arrangement of these lines to form borders.

Then will come simple geometrical designs to be embroidered on collars, pockets, etc., measuring and drawing designs to fit into a given space, as for a pinafore, a bag, a book cover, etc. Patterns for cross stitch, with a correct corner, may then be attempted.

Tracing a Design

This always presents a difficulty until eight years of age, it is better, after spacing and drawing designs on paper, to draw them on to the material itself, first pinning the material
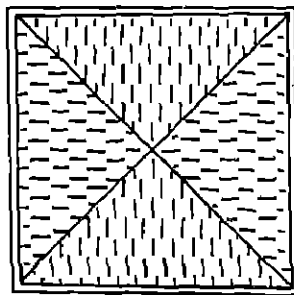
FIG. 1

Needle Case, worked in Tacking and Running Stitches
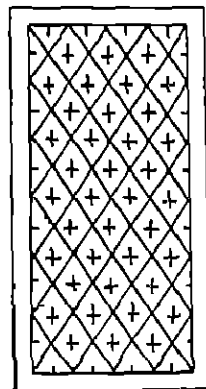
FIG 2

Needle Case in Running and Cross Stitches

Worked in Coton a Broder (Two Colours) on Unbleached Calico

firmly to the drawing-board, using a clear, sharp pencil and a clean ruler. Children of nine to eleven can, after careful teaching, trace quite well; practice in tracing maps has been helpful.

It will be found easier to have the carbon paper in small pieces, say quarter size of design to be traced. After tracing over a part of the design, move the carbon paper to the next part, with scissors, without moving the design as pinned to the board at first. Do not put any drawing pins through the carbon paper, as this would mark the work

Good practice for the children is afforded in
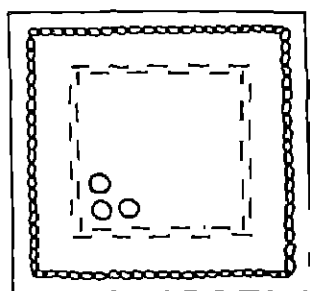
FIG. 3
Needle Case in Tacking and Chain Stitch

tracing designs, as great care is needed to get good results.

This tracing is better done in the art room, as drawing boards and a good light are necessary.

Stitch Direction

The careful working of a few simple straight-line stitches is essential. Very often a single stitch is all that is necessary to work out a design. At this stage the stitches taught belong to the line group—tacking, back stitch, chain stitch, etc.—and a very good result can be had with any one of these if the children are taught to take pains to produce good, even stitches, the art of making simple stitches beautifully. Children love quick work, and if left to themselves they would cover the lines with large, uneven stitches. A good design can easily be spoilt with badly formed, ill-shaped stitches. A few simple rules will teach the children to remember that the design suggests the stitch direction. Flowers and leaves make a good illustration: veins, lines

indicating growth from the centre, up and down lines, etc. When once the stitches have been worked on a sampler it is easy for children to choose stitches which will best express the design; as the design flows so must the stitches follow.

No stitch must be of such a length that it leaves its given position on the work—every stitch must go home As a rule children are fond of too long stitches. Corners are also a difficulty; a clear corner with no overwrapping of stitches, definite in the shape it is intended to be, must be insisted upon.
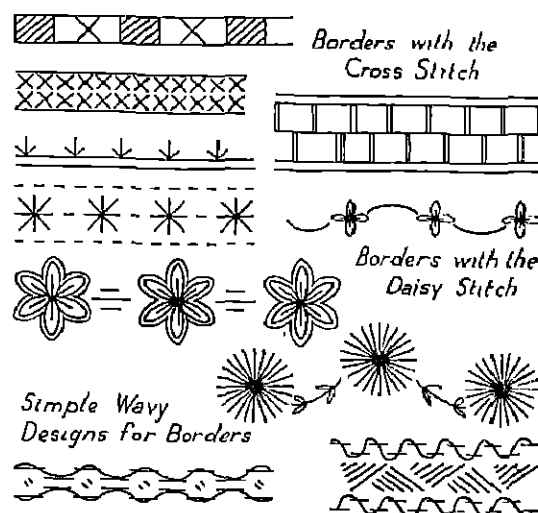
FIG 4

Colour

The Colour Plate given, together with a chart showing embroidery threads arranged in lines of each colour, will be found helpful to the teacher and of great interest to the children This chart can easily be made with a large sheet of drawing paper, the colours can be bought at most art shops and stationers on gummed paper. The children can make smaller charts for themselves (See Colour Training Vol. IV and Colour Wheel chart)

This lesson in colour is generally given by the art mistress, though a colour chart, and constant reference to it, is always necessary in the needlework room. Children choosing their colour schemes will need advice from a teacher, even

4 Simple Designs
for Doll's Bed Cover

1

2

3

4
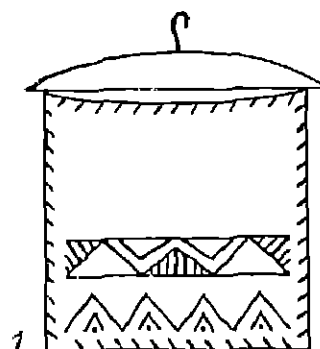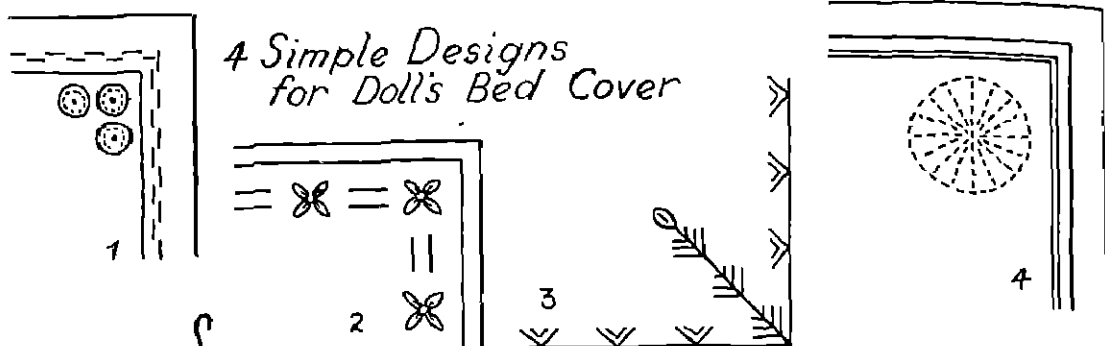
5 Designs for a
Work Bag

1

2

3

4

A Purse Bag

6
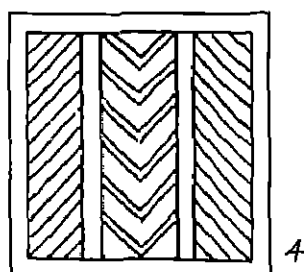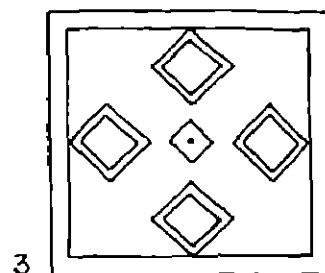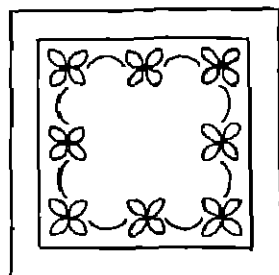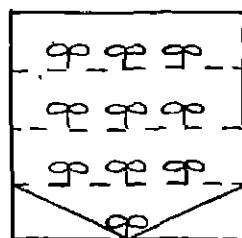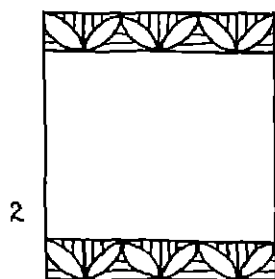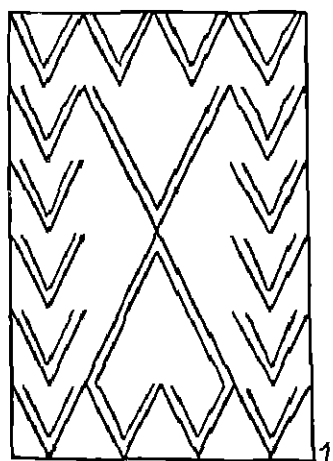
3 Designs for
Book Covers

1

2

3

FIG. 5

1216

NEEDLEWORK COLOUR PLATE
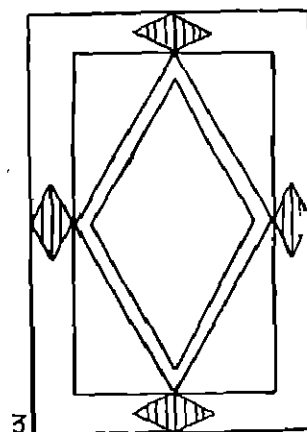
HIGH
LIGHT

LOW
LIGHT

HIGH
DARK

LOW
DARK

NEUTRAL TINT

RED **ORANGE** **YELLOW** **GREEN** **BLUE** **VIOLET**

Colour chart for use with embroidery threads: "Needlework in Correlation with Art."

iii'i

(1 7569)

after a lesson on the subject; their colour sense often departs from them when several colours are seen, and often pink and green predominate.

The ways in which children respond to colour form a very interesting study, and one which will be found most fascinating to a teacher. Children living in the country will often choose very pale colours and quiet colouring, whereas children living in the town will reach out for bright, cheerful colours, the direct result of the lack of colour, flowers, trees, etc. around them

The colour scheme can make or spoil a design. It should be decided upon when the design is drawn and not after the work is started. The best arrangement of colour is a simple one which depends, to a great extent, on the ground colour on which it is to be worked.
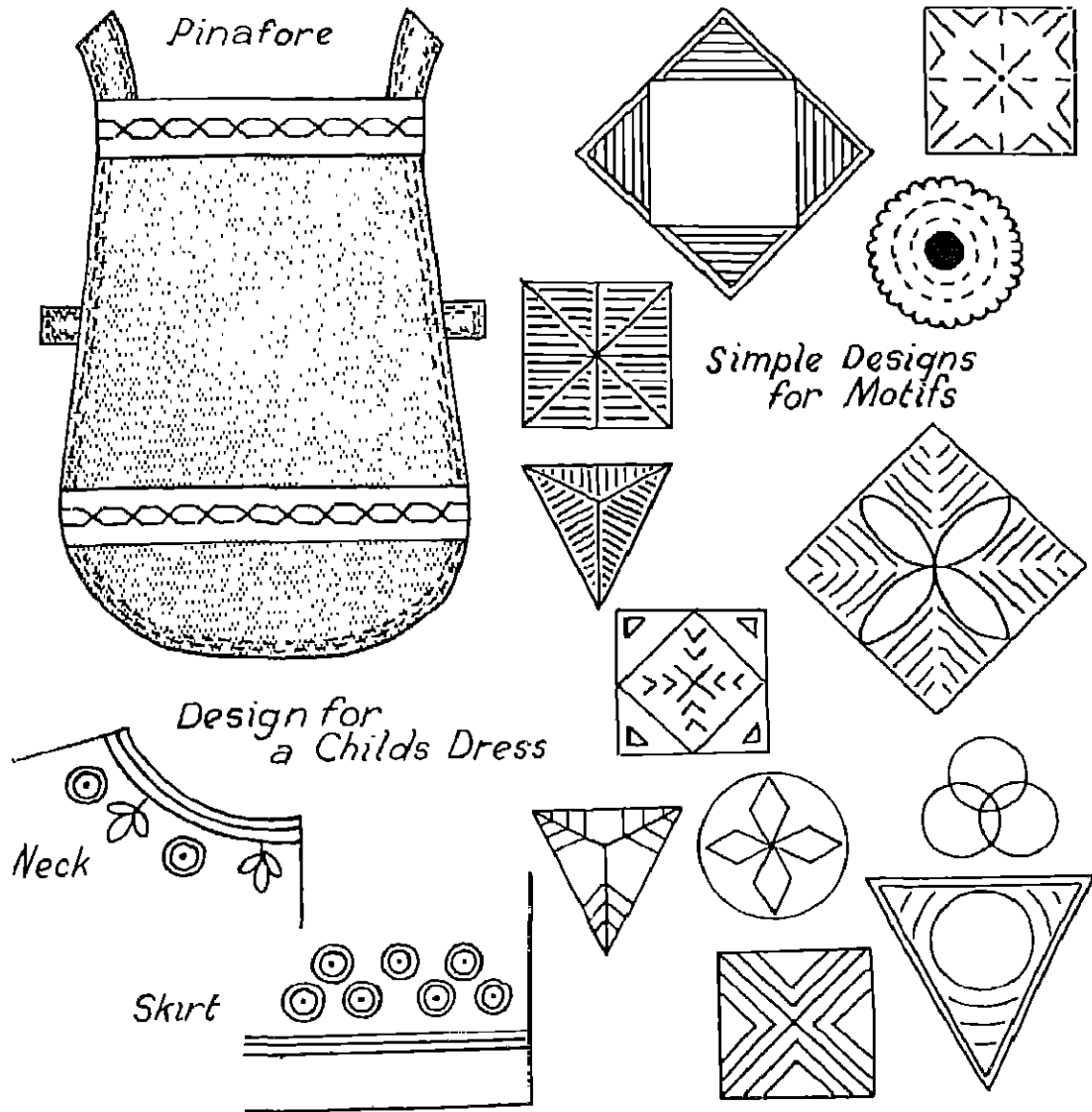
Fig. 6

PRIMARY, SECONDARY, AND TERTIARY COLOURS

The Primary Colours.	Red, yellow, blue. They are called primary because they cannot be produced by mixing any other colours.
The Secondary Colours	Orange, green, purple Produced by mixing any two primary colours
The Tertiary Colours	Citrine, olive, and russet Mixing any two secondary colours will produce a tertiary colour
The Colours of the Rainbow	Comprise all the primary and secondary colours, and indigo, which is a shade of blue

Mixing black with any colour makes it darker, and produces a shade of that colour.

Mixing white with any colour makes it lighter, and produces a tint of that colour

Practice Work

A large case of coloured threads, in various thicknesses, should be kept in the needlework room, the children being allowed to experiment in working out simple stitch designs to their own colour schemes They soon learn the effect of colour, the effect produced by the use of two colours, tones of a colour, and colour contrast; these are most valuable exercises, which cannot be neglected. They also see the difference produced by using a soft and a hard thread. Experimental work in needlework is quite as necessary as it is in science or cookery—e g. the effect of various cottons on hard, firm materials such as unbleached calico, on soft, closely woven material such as cambric, and on a material of soft and coarser threads—linen.

This experimental work will also be found useful to fill in a gap if a teacher should be unable to take her own lesson and a substitute is not available to carry on the work. The time will be well spent and the work will not suffer in consequence.

Materials and their Suitability

MATERIAL	USE
Calico, unbleached.	Feeder, needle cases, cap, doll's bed, samples of stitches
Holland.	Pinafore, work bag, book cover
Linen.	Book cover, tea-cosy, tunic dress, work bag
Tobralco	School blouse.
Cambric.	Nightgown, petticoat.

Embroidery Threads

D.M.C.   Ingrain thread No. 12., No. 16.

D.M.C.

Coton à Broder.

Cartier Bresson filoche thread size No 10

Anchor School Coton à Broder

(These are all soft cottons, and can be had in all colours)

Star Sylko—is harder, stronger, and has a more firmly twisted thread.

The materials and threads given are all suitable for school use, a ground material for embroidery should be firm and with even threads, but stiffness and overmuch dressing are to be avoided.

It is possible to get dress linen of a good quality, fadeless, and much cheaper than embroidery and drawn-thread linen, which is too expensive for the Junior Schools

Simple Stitches and their Uses in Design

NAME OF STITCH	USE IN DESIGN
Tacking	For lines and borders. Broken line.
Back stitch	For a fine outline
Stem stitch.	For stems and bold outline.
Running.	For a broken outline, also a light filling for spaces
Crewel stitch.	For leaves and filling small spaces
Satin stitch	For filling leaves and spaces smoothly, as its name suggests
Chain stitch	For border lines and thick outlines.
Cross stitch	For small squares and borders.
Blanket stitch.	For edges and border lines

Only a few stitches have been given, but these will be found sufficient for the Junior School. Varieties of these, also worked in double rows, or overcast with another thread, will work many designs. The correct stitch and its proper formation is what really matters

It must again be emphasized that practice makes perfect. Seldom is sufficient time given to this very important part of the work. Time should not be wasted on useless specimens— every piece can have its use for pin cushion, needle case, doll's apron, etc.

Tacking

Running

Daisy Stitch

Back Stitch

Cross Stitch

Satin Stitch

Running and Cleaving

Blanket Stitch

Double Blanket Stitch

Tacking and French Knots

Chain Stitch

Feathering

Veining
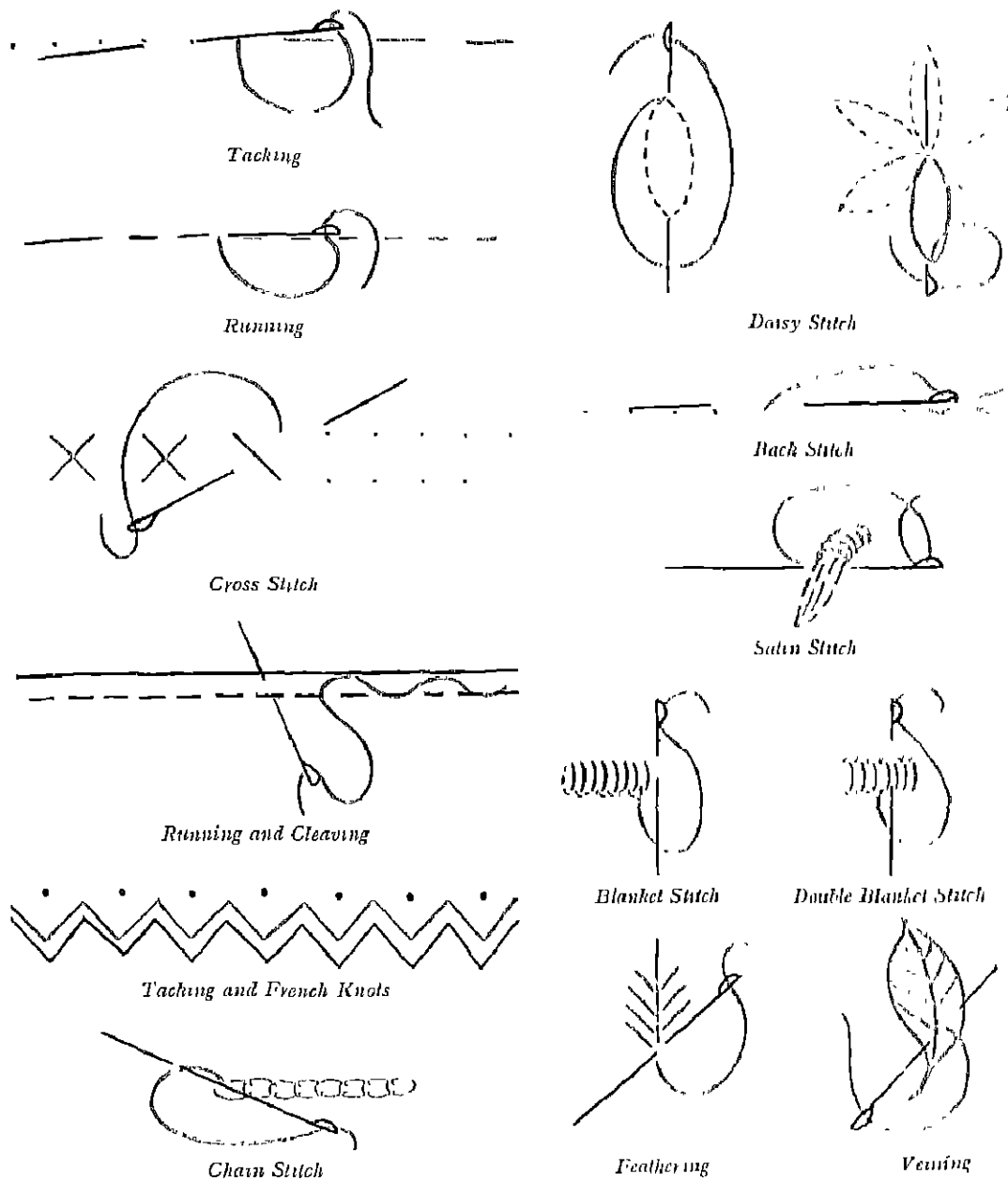
FIG. 7

Diagrams Showing how to Make Simple Stitches for Design
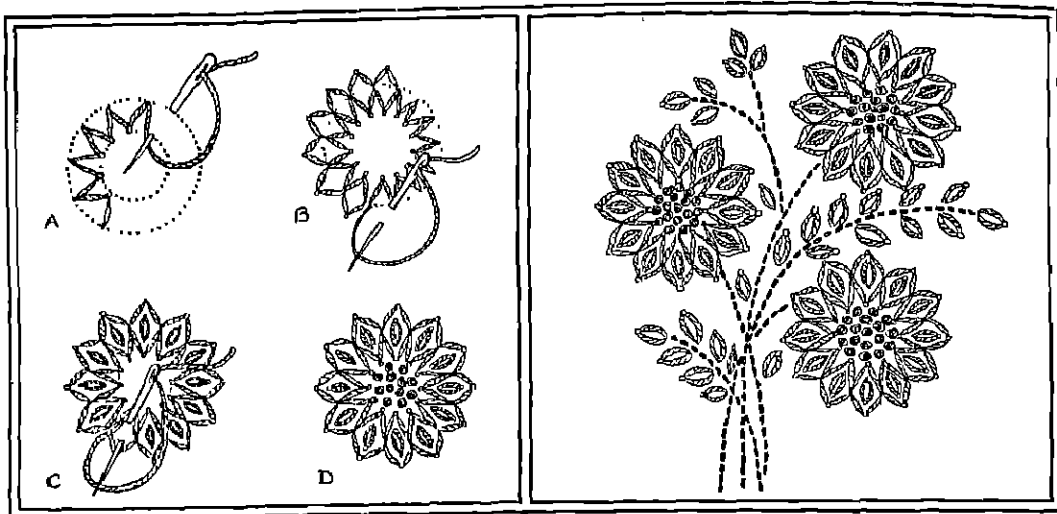
EMBROIDERY

SINCE the advent of the new stitchery into the school the needlework lesson has come to be regarded as a more valuable and important factor than formerly in the education of the young.

The great variety of beautiful design stitches —just all the old stitches, but used in new and alluring ways, and in all the colours of the rainbow—captivates every little school artist. With the lovely stitches and their own magic fingers, children can soon learn to form little rounds, squares, and other shaped units with which to build up dainty and original patterns.

The endless embroidery patterns, both borders and motifs, which seem to grow out of the simple constructive stitches, open up a natural channel of self-expression to every child—boy or girl—who can use a needle, and to the least as well as to the most gifted.

Design itself, which is the chief element of embroidery, the arranging and blending of colours, the delicate manipulation of needle and thread, all stimulate the love of beauty, bring out latent skill and taste and so release artistic and creative power.

Moreover, the pleasure the young scholar feels in that her ideas are of some value in the class lesson becomes an incentive to her imagination, and brings dexterity to eyes and fingers.

Imaginative work arises out of free and intelligent work in any art or craft, and no less so in the art of the needle.

Further, the children of the Junior classes, in learning to *construct and decorate* their little bags, mats, pinnies, etc , in one and the same process, instead of making and trimming separately, as formerly, are being trained in the very first principles of all good design, and the basis of all true art and craft.

The easy and fascinating way in which they have learnt to build up original borders and *motifs* with the constructive stitches—tacking, hemming, loop, wave, button, chain, etc — which form the A B C of the stitchery, naturally constitutes a perfect preparation for the more advanced work of the Secondary classes. And later the progressive work of the Secondary classes forms an excellent basis for the study of traditional styles and methods for those who wish to specialize in the art of embroidery proper.

It will be understood that the various little patterns herewith described are chiefly given as suggestions for guidance With a little practice both teacher and scholar will find it an easy and delightful task to take any chosen stitch—even the tacking stitch—with which to form little group units, and with these again to build up the larger geometric and floral *motifs*, similar to

those illustrated. Where possible, it is always best to let the children practise the border or *motif* with paper and pencil before starting to work with needle and thread on the material.

A very good plan is for each child to make a sketch of her design in the drawing lesson. She can then have it before her in transferring it to the material, and later she can copy every little design she makes—border and *motif*—into her needlework book.

Demonstrations of the various stitches are usually helpful; this may be done by means of a canvas frame, blackboard sketches, or by actually describing the stitches on a piece of material with a very large needle and rug wool in effective contrasting colours. The children can, with their smaller needles and thread, follow the movements described by the teacher

The children of the Junior classes are now generally familiar with the stitches from which all the simple borders and *motifs* illustrated in these pages are built up These are all suitable for the making and decorating of such little articles as are usually worked by the Juniors, i.e. bags, sachets, nightie cases, decorative mats, simple tray cloths, aprons, and so on Selecting the border or *motif* to be applied to any given article, and the colours to be used, will generally be done by the teacher in conjunction with the children themselves

For the earlier Junior work the stitches will generally be worked about $\frac{1}{4}$ in in size, gradually decreasing to roughly $\frac{1}{16}$ in. as the eyesight reaches normal vision, and the hands muscular control.

First Decoration

The tacking-stitch border (Fig 1 A) worked in single or double rows round the little fringed mat is generally the first form of needle decoration for the child There is a simple beauty in straight lines, even of tacking stitches, worked in two colours. Where there is no guiding hem, a crease should be made in the material. The size of the stitch will depend on the capacity of small fingers

Two rows of cross stitch combined with three of tacking stitch compose the simple border shown in Fig. 1 B. The cross stitch here is formed

by working a double row of hemming stitch, as the diagram shows. In this way the cross is formed on the under side as well, and together with the tacking stitch makes a very effective reversible border for tray cloths, table mats, etc.

For the border in Fig. 1 C a row of wave—or, as it is sometimes called, zig-zag—stitch is worked first, then a row of trefoil tacking stitch. This stitch is called trefoil tacking because it is
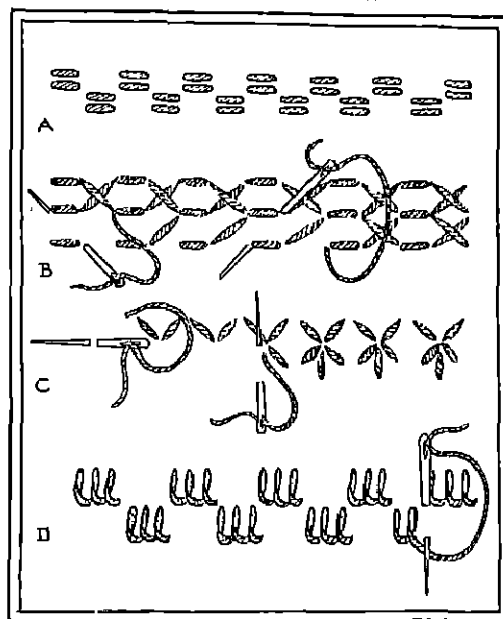
FIG 1

Simple Borders

composed of three straight stitches starting from the same base, one to the right, one to the left, and one in the centre The needle in operation shows the movements. The two side stitches are made a little shorter than the centre one, which gives the neat, trefoil effect With this stitch can be formed any number of dainty little units by grouping in various ways, for instance, four worked opposite each other, finishing off with one or more French knots, make an easy beginning.

These two borders, Fig. 1 B and C, form suitable constructional decoration for hems, beginning with the first hemmed mat, tray cloth, small tea cloth, runner, etc , then on to neck and sleeve hems and hems round the bottom of

little pinnies or overalls, introducing two—or it may be three—colours on a contrasting background. Azure blue and gold, bright green and gold, soft red and gold, etc., on natural or deep cream-tinted material attract the colour sense of the little ones in their early efforts at making pretty borders.

A double row of blanket stitch forms the border in Fig. 1 D. The stitches are worked in groups of three, close together, allowing the space of three stitches between them, into which the second row is worked. This is more purely a decorative border, but it can be used for hemming by working so that the knotted ends of the stitches in the first row hold the inturned edge, and the second row, worked below the hem edge into the intermediate spaces, catches down the fold with each stitch. This makes a charming hem decoration.

Circle Units

Fig. 2, A, B, and C, introduces the child to the first simple method of making little circle units
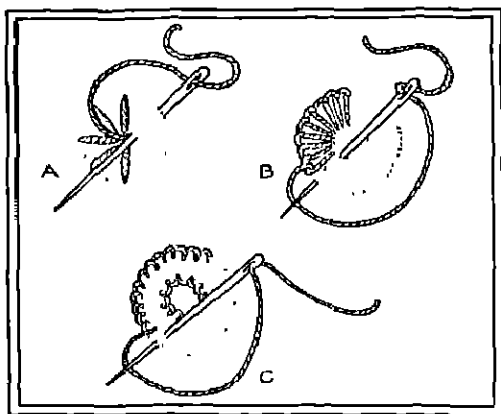
Fig. 2
Circle Units

in semblance of blossoms. The circles will be marked on the material with pencil or coloured chalk. A button or coin will do for this. Diagram A shows the tiny round being worked with straight stitches, just tacking stitches worked circlewise. Eight, ten, twelve, or more stitches will be inserted as fancy dictates. Or the stitches may be quite closely filled in when a more solid

blossom is desired. When the round is completed a French knot is made in the centre; then, to finish off, a small stitch, like a back stitch, is made on the underside, passing the needle through the thread itself in the process, which makes a neat and secure finish when the thread is cut away. Another way, instead of the French knot, is to make two small back stitches, worked close one over the other, then put the needle through to the underside and finish off in the way already described. This makes a neat little centre dot, and comes more easily than the French knot to some children; this method is certainly advisable for beginners.

Fig 2, B shows a little round being formed with blanket stitch. A tiny inner circle is marked for this, leaving space in the centre for a few knots or back stitch dots, as described above.

Fig. 2, C is worked with single button stitch, as it is now more commonly called. It is just a form of blanket stitch, worked in precisely the same way except that a narrow instead of a deep catch of the material is lifted on the needle. The inner ring has the button stitch worked the opposite way from the outer, i.e. the knots coming to the inside of the smaller ring. Three, four, or more of these grouped in various ways make delightful little *motifs* which the children soon learn to work in the corners of their mats, sachets, bags, collars, and other articles. Each one in the group may be in a different colour—pink, blue, gold, orange, helio—so forming dainty little stemless posies.

French Knots

Stems may be added and the blossoms arranged more openly. One or more dots or French knots will be worked in the centre of these, and Fig. 3 shows in detail the making of the first simple French knot, that is, a knot with one turn on the needle. To begin, fasten the thread on the underside just exactly as described above in finishing off, then bring the needle through to the front, and holding the thread firmly under the left thumb slip the point of the needle under it (B). Then, turning the needle round close to where it came through, pass it to the underside (C), and bring it up in position for the next knot (D).

:nch knot is so decorative and useful voik of every kind that every little kei should practise it well. It not only ideal filling for the hearts of blossoms, ·d in little clusters by itself, it can make

stitch is introduced here at *A* in the diagram, and the needles in operation show the method of working this invaluable and lovely stitch

The row of tacking stitch is worked first, then the first row of loop stitch, coming just opposite
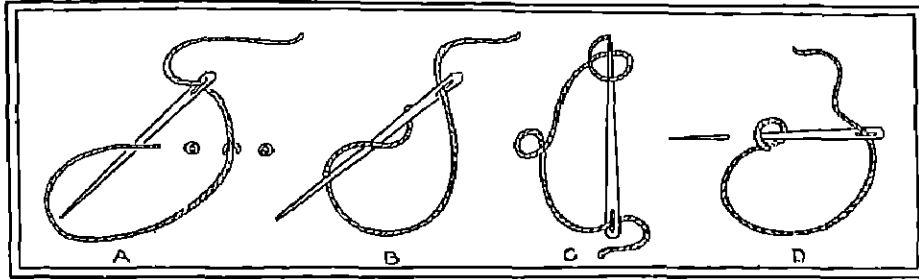
FIG. 3

A Simple French Knot

iest little flower forms and berries) *A*). And again, worked in single line most charming border decoration

id Cross Stitches

ee borders in Fig. 4 are suitable for icing stages of Junior work The loop

FIG 4

More Intricate Borders

the spaces of the tacking stitch, and the second row into the spaces of the first. It will be seen, therefore, how easy it is for the little embroiderer to learn to keep her lines straight and her stitches even, as the one row provides a perfect guide to the one to follow, both lines and stitches. The row of knots between the loops is worked last.

At *B* in the diagram, the middle row in cross stitch is worked first. Here also the cross is formed with a double row of stitches—the first row from left to right, litting a vertical stitch at the back, the second row from right to left, passing the needle in and out through the same holes, as the needle in position shows. This close form of the cross stitch can be worked in one row or in two separate rows. But the latter, as shown in the diagram, is the easier, and so more suitable for the Juniors

Then the loop stitch, formed into trefoils similar to the tacking stitch trefoil, is worked along the points, first one side and then the other

A charming colour blending here, for instance, is to work the cross row in leaf green, the top trefoil row in rose pink, the under row in carnation red Or again, the cross row in cornflower blue, the one trefoil row in tangerine, the other in salmon pink, is another pretty colour scheme

The third border, Fig 4 *C*, forms a very decorative band of stitchery, especially suitable for working round cushion-covers and runners,

table centres, sachets, and rectangular pieces of all sorts, as the four-looped unit fits so nicely into corners. It gives scope for effective colouring, too. On a blue or green ground, for instance, the tacking rows might be in bright rust, the loop units in gold or lupin blue, the knots in ruby red. But every little needle artist will choose colours for herself, of course, with teacher's sympathetic assistance.

Guiding lines may always be marked for the working of these and other similar borders where not worked on a hem line, until young eyes and fingers gain judgment and control. The top line

safely be a little larger than straight ones. The loop stitches may also be about $\frac{1}{4}$ in. over all— that is to say, including the tiny tail, or catch-down portion of the stitch.

It is all-important that the children should also now be taking equal care in regard to the appearance of the underside in all their stitchery work. Wherever there is a too long stitch at the back, caused by working stitches alternately placed, or in passing from one unit to another, for example, the thread should always be entwined in the preceding stitch or stitches as required.
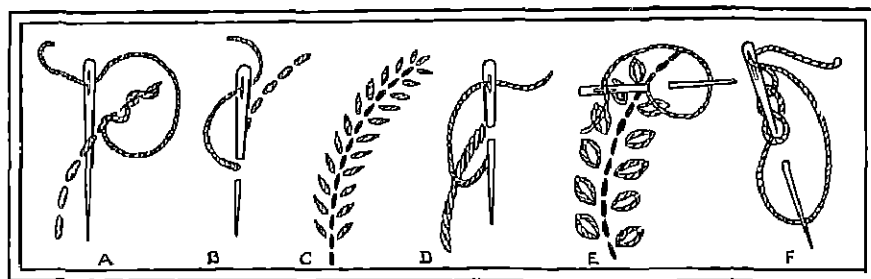
FIG. 5

Methods of Working Leaf Sprays

only would be marked for Fig. 4 A, the middle line for B, two parallel lines for the outer rows at C, leaving sufficient space between for the inner rows; or here, also, a line need be drawn only for the middle row with dots marked at intervals along the line for the position of the units. Then the two rows of tacking stitch will be worked at each side, the inner rows first and then the outer.

Size of Stitches

The finished width of these borders in Fig. 4 should range from about $\frac{1}{2}$ in. to $1\frac{1}{4}$ in., that is, border A-$\frac{1}{2}$ in., B-$\frac{3}{4}$ in., C-$1\frac{1}{4}$ in.

At this stage, about ten years and over, the children's eyes and fingers are gaining normal power, so that the size of the stitches should now be decreasing proportionately. For the tacking rows a $\frac{1}{16}$ in. stitch is a nice, suitable size, the cross row, the slanting stitches forming a cross, should be $\frac{1}{4}$ in. or slightly over, as stitches crossing each other may always with

Leaf Sprays

The method of working a few simple stem and leaf sprays is shown in Fig 5. All of these are suitable for stemming the various little floral *motifs* illustrated in these pages, and others similar. The first, Fig. 5 A, is the easiest for the young pupil to begin with. It is worked with what is termed retracing or threading stitch. First the little curving line, which has been marked or dotted on the material, is worked with tacking stitch the length of the stem, and then, turning, the needle is slipped under each stitch, working backward.

Fig. 5 B is worked with back stitch and is also quite easy to do. The needle is brought up from the wrong side, inserted about $\frac{1}{16}$ in. in advance of where it came through, and out the same distance below this, as the needle in operation in the diagram shows.

At C the tacking stitch is still used by the little embroiderer to form her first representation of a leaf or flower stem. Here again the

stem itself is formed first, and then the leaf stitches added. These are just plain little stitches, like the tacking stitch, worked in a slanting position, one at each side of the stem to loop, feather, blanket, and buttonhole stitch, as they are all worked by holding the thread under the left thumb, whilst hitting the stitch on the needle
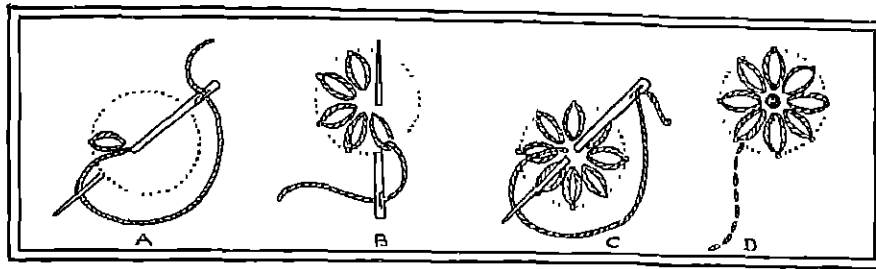
FIG 6

Working a Tiny Blossom

alternately, beginning at the base and working up to the tip.

Fig. 5 D shows the well-known stem stitch, also called the outline stitch.

Chain stitch makes a nice thick stem, and so it is more appropriate for stemming larger leaf and flower forms than those illustrated here.

Geometrical Designs

Another simple way to form stitchery designs is to draw small squares, oblongs, circles, triangles, etc., outline them with one or other of the stemming stitches in Fig. 5, then work
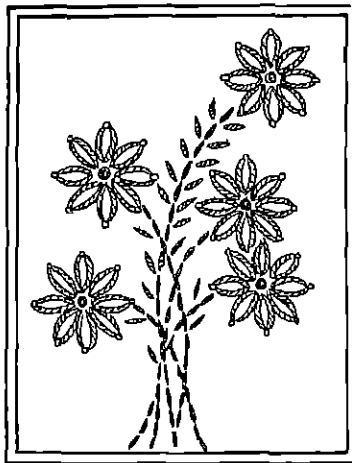
FIG 7

The Floral Spray

FIG. 8

Another Simple Blossom Unit

In Fig. 5 E the tacking stitch again forms the stem, and loop stitches the leaves, working in the same way as in D. It is also worked in one journey, that is, one loop alternately along each side of the stem.

Chain Stitch

The chain stitch, Fig. 5 F, is just another form of loop stitch, a little cousin, so to put it,

little stitchery flowerets in the centres, or fill in the shapes entirely with loop or cross stitches and French knots In this way can be formed many dainty and charming geometric *motifs*

Floral Forms

We now come to the building up of little floral sprays.

Fig 6, A and B, describes the process of

forming a tiny unit blossom with loop stitch, finishing with a French knot at *C*.

In *D* a short stem is added, worked with tacking stitch. Five of these form the spray in Fig. 7, with the small straight stitches added along the stem, worked as described at *C*, Fig. 5

Such little sprays can, of course, be arranged in many varied ways But to secure symmetrical arrangement they must be practised on paper first.

Fig 8 *A* describes another simply worked blossom. We begin with the first tiny round of small, straight stitches, worked exactly as shown in Fig *2 A*, leaving space in the centre for the group of knots. And here what is termed the open loop stitch is introduced. It is worked in precisely the same way as the close loop stitch, except that the needle is inserted to make the loop a little in advance, instead of close to where it came through, which brings it from point to point of the straight stitches. Four of these make a dainty *motif* (Fig. 8 *B*), and may be grouped in varied ways, or stemmed and arranged to form larger *motifs*.

Berries and Leaf Sprays

Fig. 9 *C* is suggestive of a group of berries with leaf spray entwined In Fig 9 *A* the needle describes the French knot being worked with a double turn on the needle to form the berries These also can be grouped in many interesting and charming ways other than shown here. The little figure *B* forms a dainty *motif* by itself The tacking and loop stitches are used for the leaf spray here also, but back stitch or stem stitch will do equally well

Another advancing step is illustrated in the drawing heading this chapter (p. 1220). Here the open loop is taken as the basic stitch for the building up of this little floral spray. The basic stitch used in forming a stitchery design, border or *motif* is like the key note in the composing of a piece of music

The whole of the spray is carried out in four stitches, open loop, close loop, and French knot, with back stitch for the stems.

Two circles are marked for the working of this little blossom, as in Figs. *A* and *B*, and it is started by working the open loop inward in the

first round, *A*, and outward in the second round, *B*. Here the blossom has twelve petals, with a small loop stitch worked into each, as the needle in Fig *C* shows. Fig *D* shows the dainty blossom finished with a group of French knots in the centre.

Colour Schemes

Using this blossom as a basis combined with the leaf spray, as illustrated, the most charming
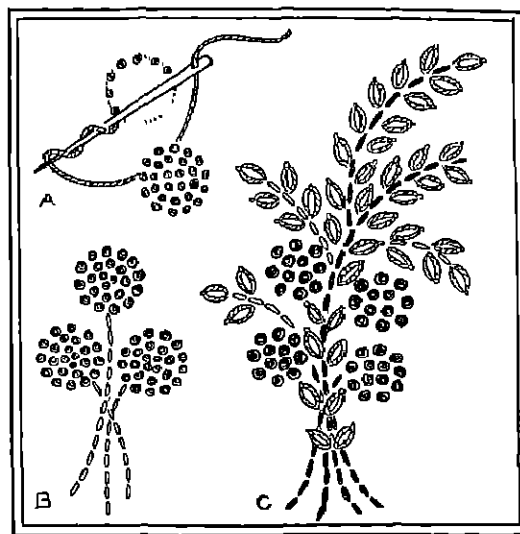
FIG. 9
Berry Motifs

little floral patterns can be planned and arranged by the children themselves, and they learn to delight in doing this.

The soft yellow of the cowslip, the bright gold of the kingscup, marigold and daffodil, the tones of the wallflower, the blue of the forget-me-not and cornflower, the purple of the pansy, lilac, and aster, the glowing pink and red of the cherry blossom—all the greens, blues, golds, and roseate hues of field and garden can be worked into these dainty sprays Two greens may be used in the working of the leaf sprays, a dark shade for the stems and lighter for the leaves ; or, again, green stems with a rich brown for the leaves, and warm crimson for the blossom or fruits, if autumn tints are being suggested.

KNITTING

KNITTING is perhaps one of the most universally taught school crafts. It has much to recommend it, so little equipment being required and the articles produced being so extremely practical.

It is a very ancient craft, for the inhabitants of the earth as early as the Stone Age intertwined fibre and rushes to form baskets in a manner very much resembling knitting in effect

There are certain drawbacks to knitting as a school craft, one being that it is so much done in the homes, particularly in the country, that through its ordinariness it may cease to attract and keep the child's interest. It is also felt that more attention to choice of colour and planning of design is needed in the teaching of knitting.

Design. Where knitting is being taught in a school, or a section of a school, the patterns made in the design class could be applied, for instance, if geometrical design is being taught, starting with a square and passing to stripe, diamond, etc., the shapes could be worked out in knitting in the earlier stages, and in simple knitting patterns for borders, etc., as the girls get more able. Then, as free design is taught, patterns of animals and even figures and their clothing could be worked out and knitted With older Juniors simple designs for garments could be made, coloured, and worked out.

The Technique of Knitting

Casting on Stitches

Method I · With One Needle. Leave an end of wool sufficiently long to make the number of stitches required and make a loop (Fig. 1), place the needle in this loop as Fig. 2, and, taking the needle in the right hand and the short end of wool in the left, pass the thumb of the left hand under the wool to form a loop (Fig 3) which is afterwards placed on the needle and tightened up (Fig. 4). Fig. 5 shows the needle with four stitches cast on.

Method II : With Two Needles Make a loop (as Fig. 1, Method I) near end of wool, place one needle through loop from left to right

and the other from right to left (Fig. 6); now take wool C and pass it in front of needle B (Fig. 7), form wool C into a loop on needle B (Fig 8); place this loop on needle A and withdraw needle B (Fig. 9); repeat from Fig. 2 until required number of stitches are obtained. Method I produces a firm, tight edge and Method II a more elastic edge Stitches may be cast on so that a flat piece of knitting is produced,

Casting on Stitches Method I

Fig 1   Fig 2   Fig 3
Fig 4
Fig 5

Casting on Stitches Method II

Fig 6   Fig 7   Fig 8   Fig 9

Plain Knitting

Purling
Fig 11   Fig 12
Fig 10
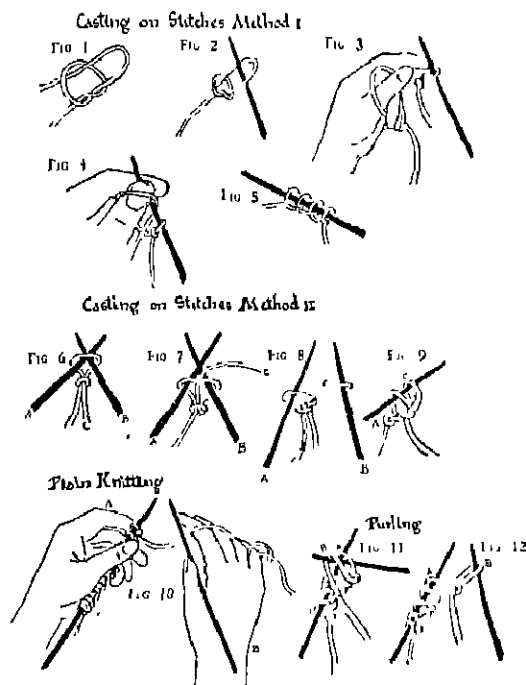
such as a scarf or shawl, when the rows of knitting are worked forward and back, or if a circular garment, such as a stocking or finger, is required the stitches may be cast on on three or more needles, which are connected into a sort of triangle, and the rows of knitting are taken round and round

Plain Knitting (garter stitch) Cast on the required number of stitches Hold the needle containing the stitches in the left hand as Fig. 10 A, and the empty needle and wool from ball in right hand as Fig. 10 B Insert the right-hand needle from left to right through first loop,

pass the wool in front of the needle as Fig. 7 (casting on stitches, Method II) this movement is made with the first finger of the right hand Draw a new loop on the right-hand needle, Fig 8 (casting on stitches, Method II), and drop the loop off the left-hand needle Proceed in this way until all the stitches are on the right-hand needle Turn and take the right-hand needle in the left hand and the empty needle in the right and repeat row after row

Purling. After stitches are cast on bring wool to front of work, instead of at the back as in plain knitting. Insert right-hand needle from right to left through first loop and take wool over and behind the needle, Fig 11 (Purling), draw wool at *B* through loop at *A* (Fig. 12) and drop loop *A* off left-hand needle, repeat until all the stitches are on right-hand needle.

Purling is really plain knitting the wrong side out, and it is generally worked in alternate rows with plain knitting, or in alternate stitches or pairs of stitches for pattern work.

Casting off Stitches

Knit the first and second stitches of row, pass the left-hand needle under the first stitch knitted and slip the second stitch through the first, leaving the first on the right-hand needle; knit another stitch and repeat, taking one stitch through the other so that there is always only one stitch on the right-hand needle At the end of the row thread wool in darning needle, pass through last stitch, and darn off.

Final Hints on Preliminary Teaching

To Decrease Number of Stitches Knit two together.

To Increase Number of Stitches. Knit a stitch, and before slipping it off the needle knit an extra stitch into the back of the loop

Joining Wool. Split the two ends of wool and remove half the number of strands for several inches, lay the wools together with the two ends pointing in opposite directions and continue knitting.

Slipping a Stitch. This applies to transferring a stitch from the left-hand to the right-hand needle without knitting it.

It is of the utmost importance that the points about knitting just described be fully under-

stood, for from these—casting on, plain knitting, purling, increasing, decreasing, slipping stitches, and casting off—the most successful shaped and patterned garments and articles can be made. But the teacher of Juniors will find it best to take each of these methods and teach it on the simplest possible articles at first, gradually increasing the difficulty as the methods are understood

Plain Knitting: Useful Articles

Figs 13, 14, and 15 show simple all-over patterns, formed by squares and stripes, which might have been done by quite young children having their first lessons in geometrical design. Three useful articles are then shown on which these patterns are used.

Square Cushion (Fig 16). Use four-ply Greenock fingering and No 10 needles. Cast on 24 stitches and knit 56 rows of plain knitting (in this and the two following articles which are made with garter stitch always slip the first stitch of a row as it makes the edge better). This should produce a 4 in. square Knit 13 blue and 12 orange squares; oversew edges of squares together with one of the wools, taking a loop of knitting from each square to a stitch, place squares alternately blue and orange as Fig. 17. The cushion may be backed with blue hessian, or felt, or the back may be a repetition of the front. A good result can be obtained by using three colours, such as orange, blue, and green, and having one side of the cushion orange and blue and the other orange and green. A twisted woollen cord should be sewn at the edge, and a hand-made woollen tassel at one corner

Shopping Bag (Fig. 18) Use No. 3 Ardens' Star Sylko and No. 12 needles Cast on 12 stitches and knit a strip 33 in long, knit three other strips like this Cast on 18 stitches and knit 40 rows green, 40 rows black, until the strip is 33 in long This strip should start with a black square and have 6 black and 5 green squares. Knit another strip like this, then knit a third strip in the same way, but starting with 40 green rows for the centre strip (*A*, Fig 18). Join strips as Fig. 18.

If the Star Sylko is too expensive, knitting cotton of the same thickness may be used. The bag should be lined with casement cloth or sateen and set into three-ply wooden handles

Plain Knitting or Garter stitch on two needles.

FIG. 13
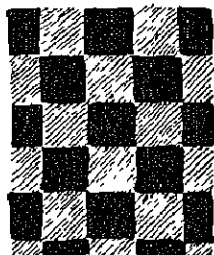
FIG. 14
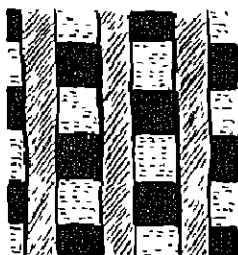
FIG. 15
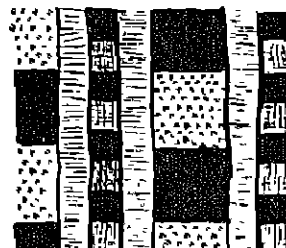
FIG. 16
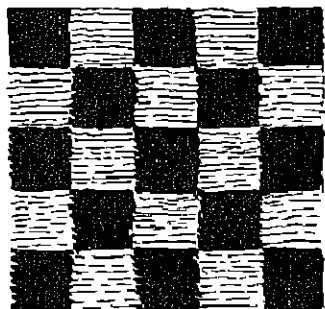
FIG. 17
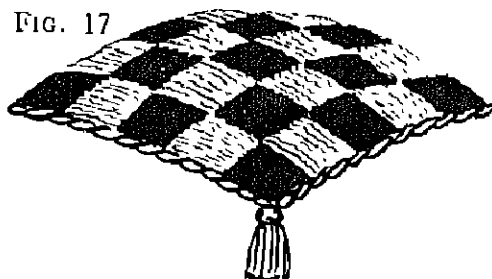
FIG. 18
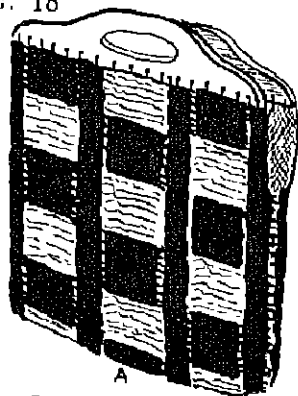
FIG. 19
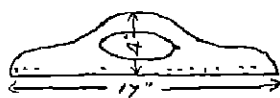
FIG. 20
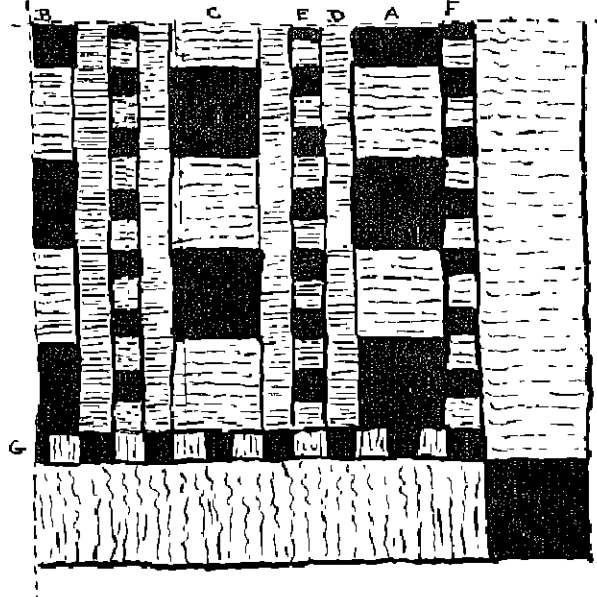
(Fig. 19). These handles are quite easy to cut with a fretsaw and can be coloured green with batik dye and polished with Ronuk Floor Polish

Sofa or Travelling Rug (Fig. 20). Use double knitting wool and No 7 needles. Cast on 30 stitches and knit 60 rows brown, 60 rows orange, until there are 5 brown squares and 4 orange; this will be strip *A*, Fig. 20 Knit two other strips in the same way; these will be strip *B* and *O*, which is folded under (Fig. 20). Then knit a fourth and fifth strip as *C*, starting with the orange and having 5 orange and 4 brown squares.

There are 5 wide strips in the rug, 3 as *A* and 2 as *C*. Cast on 10 stitches for strip *D* and knit it 54 in. long, 8 of these strips are required. Cast on 10 stitches for strip *E*, and knit 20 rows jade green and 20 rows brown, until required number of squares are obtained as Fig. 20. Strips *F* and *G* are made in the same way.

Border Cast on 35 stitches and knit 4 strips 58 in long in orange; for corner squares, cast on 35 stitches and knit 70 rows brown.

Fig. 20, which is a quarter of rug, shows how strips should be formed. The rug should be backed with a woollen dress material or cloth of one of the colours used in knitting The advantage of the three articles just described is that being made of small, easily-knitted parts they lend themselves to co-operative work; quite a large class can be employed and really handsome articles produced which can be sold or raffled

There are also numbers of small articles which can be made in plain knitting, such as scarves, cuffs, reins, belts, caps, straight vests, dolls' garments, etc., all too well known to need description here, and it will be found that after a child has taken part in a piece of co-operative work she will be eager to try one of the smaller articles on her own, but in all cases the knitting will have more educational value if she is taught to make a paper pattern and knit to it, be the article ever so simple.

Articles Involving Increasing and Decreasing on Two Needles, and Purling

Egg Cosy (Fig. 21). Use four-ply wool and No. 10 needles. Cast on 28 stitches. Knit 4 rows (always slip stitch after turning). * 5th row slip stitch, decrease, knit row all but 3 stitches, decrease, and knit last stitch.

6th row: plain knitting. Repeat from * until only 2 stitches are left on needles, thread end of wool and darn off. Knit two pieces like this, they should be as Fig 22, one blue and one fawn; sew them together with an orange wool, forming a cross stitch, and insert a padded orange lining

Baby's Rainbow Soft Ball (Fig. 23). Use four-ply wool in five different colours and No. 10 needles. Cast on 4 stitches, knit 3 rows 4th row: slip stitch, knit 1, increase, knit 1, increase, knit 1. 5th, 6th, 7th, and 8th rows plain knitting. 9th row: * slip stitch, knit 1, increase, knit remainder of row all but 2 stitches, knit 1, increase, knit 1. Knit 4 plain rows and repeat from * until there are 17 stitches on needle; now decrease 1st row: * slip stitch, decrease, knit remainder of row until only 3 stitches remain, decrease, knit 1. Knit 4 plain rows, repeat from * until only 2 stitches remain on needles, thread end of wool and darn off. Five pieces have to be knitted in this way, they should be as Fig. 24, and each a different colour. Oversew the pieces together, leaving a small opening. Stuff with kapok and sew up.

Four-sided Tea Cosy (Fig. 25). Use double knitting wool and No. 6 needles Cast on 36 stitches, knit 6 rows (always slip stitch after turning). Then knit 1 row, turn * 8th row slip stitch, knit 3, purl remainder of row until only 4 stitches remain, knit these. 9th row, plain knitting, repeat from * 19 times—the knitting should then measure 6 in. 48th row, knit plain. 49th row: slip stitch, knit 3, decrease, knit remainder of row all but 6 stitches, decrease, knit 4. * Knit 5 rows, then repeat 49th row; repeat from * three times.

Decrease every other row as 49th row till only 22 stitches remain. Then decrease every row until only 8 border stitches remain, then decrease once in the centre of every row down to 1 stitch and darn off.

A piece the size of Fig. 26 should result. 4 of these must be knitted, 2 royal blue and 2 jade green—they should be joined as Fig. 25, lined with a contrasting colour, padded with cotton-wool, and a ball tassel added to the top.

Increasing and Decreasing on two needles
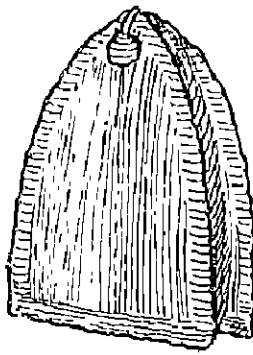
FIG. 22

FIG. 21

FIG. 23

FIG. 25
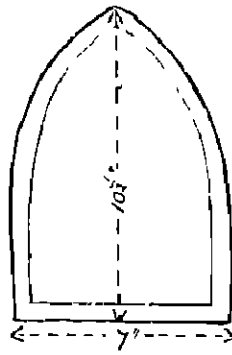
FIG. 26
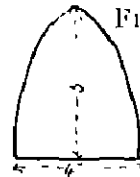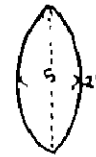
FIG. 24
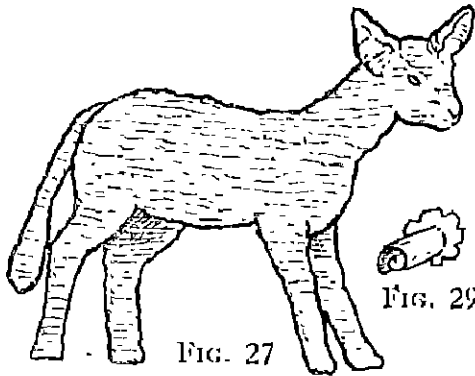
FIG. 27

FIG. 29
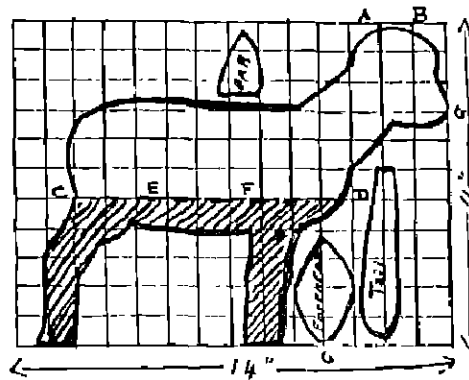
FIG. 28
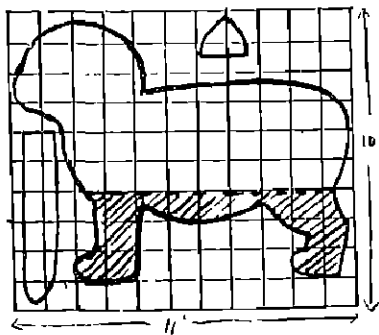
FIG. 30

FIG. 31

Knitted Toys

These, although tedious to some adults, are very fascinating to Juniors, and afford good practice in making paper patterns and following them in knitting

1. *Woolly Lamb* (Fig. 27). Use five-ply wool and No. 9 needles First make paper pattern of lamb by taking a piece of paper 14 in. by 11 in. and ruling it into 1 in. squares, then Fig. 28 can easily be drawn by counting the squares.

Start at top of head, *AB* Fig. 28. Cast on 18 stitches Knit 4 plain rows.

* 5th row, increase after the first stitch and before the last stitch.

6th row, knit plain. Repeat from * 4 times.

15th row, knit plain. Knit 12 more plain rows.

28th row, increase as 5th row; increase in this way for 16 rows every row. Cast on 88 stitches and knit 5 plain rows, cast off 22 stitches from the head side.

44th row, knit 2 together, knit remainder of row.

45th row, knit plain. Repeat 44th and 45th row 6 times.

58th row knit plain. Knit 12 plain rows.

The knitting should not be at the line marked *CD*, Fig. 28.

[:] 71st row, decrease 1 stitch on the head or *D* side and increase 1 stitch on the tail or *C* side.

72nd row, knit plain. Repeat 71st and 72nd rows 6 times. Cast off 4 stitches on the head side.

Now knit 16 stitches and take them off on a safety pin. Cast off 47 stitches. The remaining stitches will form the back leg.

Back Leg. 1st row, increase 1 stitch toward the back and decrease 1 stitch toward the front; 2nd row plain. Repeat 1st and 2nd rows 6 times. 14th row, decrease on the front side only. Repeat 14th row 6 times. 21st row, knit plain. Knit 25 plain rows [:]

Front Leg. Take stitches from safety pin on to needle and knit 46 rows

Two pieces have to be knitted as above and two for the under part of leg, as shaded part of Fig. 28.

Under Part of Leg. Cast on 108 stitches and repeat directions between marks [•].

Ear. Cast on 15 stitches. Knit 6 rows, then decrease at each end of every other row down to 1 stitch.

Forehead. Cast on 4 stitches and increase each end of every other row until there are 24 stitches, then decrease down to 4 stitches and knit off.

Tail. Cast on 6 stitches Knit 12 rows, increase at each end of 13th row. Knit 2 rows and increase at each end of 16th row Knit 12 rows and increase at each end of 22nd row. Knit till tail is 6 in. long, then cast off.

The earpiece should be knitted 4 times, and 2 pieces oversewn at the edges for each ear. The tail should be knitted twice, oversewn together, and stuffed with kapok.

To put the lamb together oversew under parts of legs to each main part as Fig. 28. Then oversew body parts together, leaving an opening from *G* to *B* for forehead, then sew up underneath part on line *CD*, leaving an opening at *EF* (for stuffing) which is sewn up last. Sew in forehead piece and stuff lamb with kapok Push in a roll of paper snipped and pushed out flat at the top, as Fig 29, where each leg joins the body, and pack the kapok around it. These paper rolls prevent the legs collapsing as the toy gets worn. Sew pleats to keep the upper parts of legs to body (underneath) and make animal stand. Sew on tail and ears, as Fig. 27, and stitch eyes and nose with brown wool.

2. *The Cat* (Fig. 31) is to be knitted with the same size wool and needles. After knitting the lamb, with the help of the paper pattern (Fig. 30) and directions, it will be found quite easy to follow the pattern of the cat, which should be started at the same place at the top of the head by casting on 18 stitches.

Knitting with Four Needles: A Doll

Use four-ply flesh-coloured wool and No. 10 needles. *Body and Head*. Cast on 18 stitches on three needles, form the needles into a triangle, and knit round after round so as to form a tubular piece of knitting 4½ in long, this will be the body of doll. Now decrease: 1st row, knit 1, knit 2 together, knit remainder of stitches on needle until only 3 remain, knit 2 together, knit 1. Knit every needle in this way, so decreasing

Designing & Knitting a simple garment.

Fig 48

Fig 47

Shaded squares show change of colour

Fig 46

If b denotes the taking up each st'h to shorten it, ll denotes ...

Fig 49

Fig 45

Knitting with four needles.

Fig 32

Fig 33

Fig 34

Fig 35

Arm

Leg
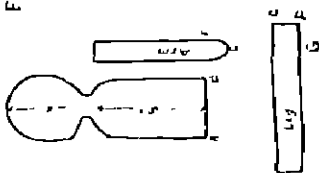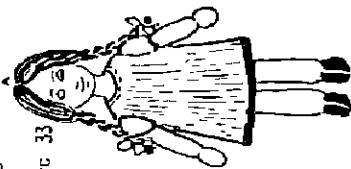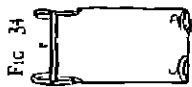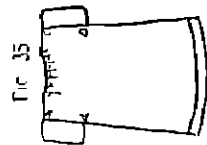
Patterns in Knitting.

Fig 36

Fig 37

Fig 38

Fig 39
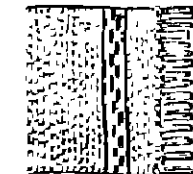
Fig 40

Fig 41

Fig 42

Fig 43

Fig 44
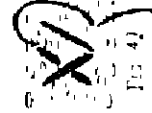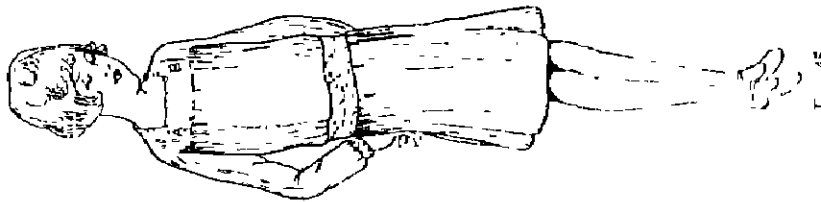
6 stitches in a row. Decrease every row until only 10 stitches remain on each needle. *Neck.* Knit 6 plain rows. Now increase after the first stitch and before the last for 7 rows, there should now be 24 stitches on each needle. Knit 2 in. plain for head, then decrease twice on each needle down to 1 stitch at the top of the head. *Legs.* Cast on 24 stitches (8 on each needle) and knit a tubular piece 8 in. long. Knit another piece like this for the other leg. *Arms.* Cast on 6 stitches on each needle and knit 2 pieces 6 in long. *To make up doll* Stuff head, neck, and body firmly with kapok, being careful that there is no weakness at the neck, and stuff out firmly on the shoulders. Oversew across lower part of body (*A B*, Fig. 32), oversew bottom of leg *CD*, and stuff Gather bottom of arms, and stuff. Oversew tops of arms and legs and sew them firmly in place on body, the ankle and wrist should be slightly gathered *Hair* Cut 1 oz. of four-ply brown wool into 16 in. lengths. Thread a length at a time in a darning needle, and thread into the head and tie, when the whole of the head is covered, leaving the face; put a line of white backstitch for parting (Fig. 33, *A*) Plait the hair and tie with red bows Work features with black wool.

Dressing the Doll

1. *Combination Garment for Doll.* Same size wool and needles white. Cast on 21 stitches on each needle and knit a tubular piece 6 in. long Cast off. Now oversew the piece *A B*, Fig. 34; bind the leg openings, *C* and *D*, and the upper edge, *A*, with blue ribbon; add ribbon straps.

2 *The Doll's Dress* (Fig. 35) affords another simple exercise with four needles. Cast on 32 stitches on each needle. Knit 6 rows black, then 5 in. red, plain. Take half the stitches on to a piece of string and * knit forward and purl back with the rest for a distance of 2 in *. Take the stitches on to a needle from the string and repeat from * to * This will make openings for sleeves (*A B C D*, Fig. 35). Cast off, oversew the shoulder seams, and pick up the loops of the stitches which have been left at the openings *A B*, *CD*, and knit in short sleeves. Run a black ribbon through the neck and bottoms of sleeves.

Black boots formed of a straight piece of knitting improve the doll.

Patterns in Knitting

Great variety and interest can be added to knitting by patterns, both those obtained by change of stitch and those by change of colour.

Fig. 36 shows *Ribbed Pattern* method. * Knit 2, purl 2 Repeat from *. This pattern has a useful and constructive value in knitting, as it produces a fabric which will not stretch as much as plain knitting, and so is used at the tops of socks, head bands of caps, in fact in all places where the garment is required to grip and not become stretched

Fig. 37, *Moss Stitch* method. * 1st row, knit 1, purl 1. 2nd row, purl 1 on top of the knitted stitch of last row and knit 1 on top of the purled stitch, repeat from * This is a pretty stitch for a whole garment or article such as a scarf or baby's coat.

Fig. 38, *Basket Stitch* method * Knit 3, purl 3. Repeat from *. Three rows like this. Then purl 3 on top of knitted 3 of last row and knit 3 on top of purled 3, knit 3 rows like this.

Fig. 39 shows a simple pattern in black on a white ground. Most elaborate and beautiful patterns can be obtained by introducing colour in this way as shown by the "Fair Isle" work, but it is difficult for the ordinary child to manage more than one extra colour. The method is quite simple; in this border the wool is simply changed to black for 2 rows to produce the black band, and for the checks 2 stitches are knitted in white, then black wool picked up and 2 knitted in black, then pick up the white and knit 2 in white. The main thing to be careful about is not to tighten the wool where it passes across the back, for if that happens the border will contract in an unsightly manner the article it decorates.

Use of Patterns

Ribbed Pattern. Beret-shaped cap for child of 11 with ribbed band for head (Fig 40).

Use five-ply wool (red), No. 6 needles.

Cast on 80 stitches, 27 on two needles, 26 on the third. 1st row, * knit 2, purl 2, repeat from *

Knit 18 rows like this. 19th and 20th rows, plain, but increase 1 stitch on needle with 26 stitches, so that there are 27 on each needle. 21st row, * knit 9, increase once. Repeat from * to last stitch. 22nd row, knit plain. 23rd row, * knit 10, increase once. Repeat from * to last stitch. 24th row, knit plain. 25th row, * knit 11, increase. Repeat from * to last stitch. Continue in this way, increasing 9 times every alternate row until there are 137 stitches on needles. Knit 7 rows without increasing.

1st row, knit 1, * knit 15, knit 2 together. Repeat from *. 2nd row and alternate rows knit plain. Continue in this way until 17 stitches remain on needles. * Knit 1, knit 2 together. Repeat from * to end of row. Thread stitches on needle, draw up and fasten off. Make a wool tassel and attach if desired.

Scarf in Moss Stitch (Fig. 41) with coloured patterned border. Use four-ply wool, saxe blue, and No 8 needles. Cast on 63 stitches, knit 2 in moss stitch, change to plain knitting (viz. knit over and purl back) and introduce patterned border (Fig. 39) in fawn. Knit 26 in. in moss stitch, then repeat the pattern and the 2 in. moss stitch at other end of scarf; add fawn fringe at each end.

Slippers in Basket Stitch. Use No. 8 needles and double knitting wool, blue. Cast on 15 stitches and knit a strip 15 in. long in basket stitch. Join according to letters (Figs 42 and 43), line with orange colour and inset to cork or fleecy-lined leather soles, edge with fur as Fig 44.

Designing and Knitting a Simple Garment

Dress for a Girl of 11. Fig 45 shows sketch design for dress, Fig. 2 pattern of dress. Use Shetland Floss double (that is, work with the wool from two balls), No 6 needles.

Skirt. Cast on 152 stitches. 1st row, * knit plain. 2nd row, purl back. Repeat from * till piece of knitting is 15 in. long. Knit 2 pieces like this and join at sides (AB, CD, Fig. 46)

Belt. Cast on 19 stitches and knit garter stitch for a length of 28 in. with No. 10 needles. Join into a belt.

Bodice. Cast on 96 stitches. Knit forward and back as skirt for a length of 12 in., then take off on to No 10 needles and knit ½ in. Next row, knit 23, cast off 50, knit 23. Knit the 23 stitches ¼ in. long for shoulder-pieces. Then knit 23, cast on 50, knit 23. Knit ½ in. and slip on to No. 6 needles and knit 12 in. for back. If the 4 rows near the neck AB, Fig 45, are knitted both ways and not purled back, the neck square will be in garter stitch to match belt and cuffs.

Sleeve. Cast on 44 stitches, No 6 needles. Knit over and purl back for a length of 13 in. Take stitches on to No 10 needles and knit 1 in for cuff, garter stitch, cast off.

To Make Up Dress. Gather top of skirt and oversew into belt. Join up EF on each side of bodice. Join sleeves and set them into bodice (FH, Fig 46)

Work double crochet round bottom of skirt, cuffs, and neck to keep it from stretching. The colour suggested for dress is lemon yellow, and the cross stitch pattern (Fig 47) should be embroidered on belt in jade green and saxe blue, the pattern Fig 48 on the neck band and cuffs. The cross stitch will work quite easily on the garter stitch. Fig. 49 shows cross embroidery stitch on garter stitch knitting.

Material for Knitting

Wool is most generally used, and there are various good makes with very little to choose between them for quality and price.

It will be found best to decide on one good make and use it right through a school. For the articles just described, wool from the Scotch Wool and Hosiery Stores' Fleming, Reid & Co., Ltd., The Worsted Mills, Greenock, is used. This firm have a branch shop in every large town. They publish little booklets which give full and excellent instructions for knitting socks, jerseys, caps, and all the garments in general use.

The following is a list of the Scotch wools mentioned in this article:

Greenock fingering four-ply, 5½d per oz
Greenock fingering five-ply, 5½d per oz
Double knitting.
Shetland Floss

RUG MAKING

RUG making is one of the oldest crafts, the very necessity for floor coverings causing them to be made in almost every part of the world from the earliest ages

It is a craft which seems particularly suited to work in Junior Schools, for there are a large variety of methods to choose from, all excellent for finger, hand, and eye training, yet, since the work is large and bold, involving no strain on the eyes Materials also are varied and interesting, good results being obtainable from little outlay.

Design calls for simplicity and lack of detail, some of the most successful rugs being built up on a geometrical basis, therefore the work in the design class can be directly applied to the material, the floor being one of the best possible places for judging the merits of a design. If a class of children made their designs and carried them out in any of the methods now to be described, and then the rugs were spread one after another on a plain floor, the children would learn by discussing them with the teacher a very fine lesson in design and colour

Colour. Rug making calls for simplicity of colour also; two, or at most three, colours bring the most successful results, and the use of pure colour, chiefly the primaries, with black, dark grey, or brown, and unbleached white or fawn is advised.

General Principles

Each group of the following projects is graded in difficulty (for instance, where knitted rugs are described, the first would be the easiest), but the order in which the different methods are placed is not intended for grading, as it is unlikely that a school would attempt more than two or three of the methods, and the choice of these must depend on the type of school, time which may be given to rug making, ability of the children, and the amount which may be spent on materials.

The best results from rug making in schools will be obtained if a suitable method can be carefully chosen and thoroughly taught, and the designs built up by the children themselves In all cases, simple designs and methods of obtaining them are suggested, but there should be no difficulty in getting children to work out other designs on the same lines.

All the rugs described are small, as large rugs are difficult for children to handle, but many of the methods lend themselves to co-operative work, and, if workers and circumstances permit, the designs can easily be adapted to larger rugs.

Appliqué Rugs

Method 1

The rug described is 40 in × 20 in. in coloured hessian *appliqué*.

To prepare the design, cut a piece of paper the required size; ordinary brown or school
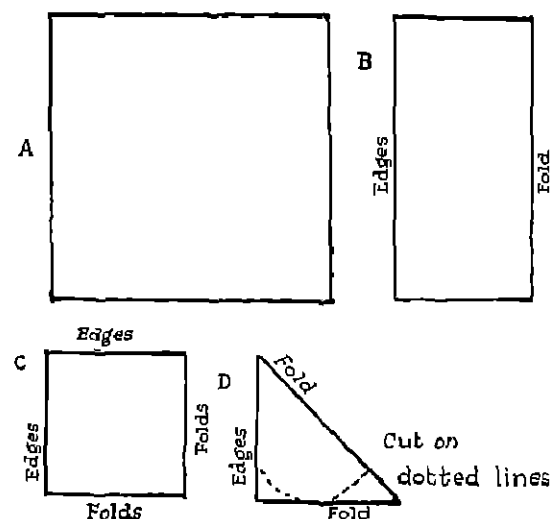
FIG. 1

Appliqué Rug 1: Paper Folding

drafting paper or even newspaper will do Fold the length into eight and the width into four parts as dotted lines in Fig. 2. Now cut twenty-one 4 in squares of paper of a contrasting colour and fold and cut eleven as Fig. 1 A, B, C, D, and ten as Fig 3 E. Place

1236

these with their centres on the intersection of lines (Fig 1) and the design will be complete

To work, have a piece of grey or fawn hessian the full size of the rug, allowing ⅜ in. turnings, place design on top, and put in a pin at each folded division on edge (A, B, C, D, E, etc, Fig. 2) Now tack lines from the pins by the thread of the hessian as dotted lines in Fig 2. Blue and orange hessian may be used for ap-

cotton at edge. If possible, have the whipped line dark brown or black, and it will greatly improve the appearance of the rug, while being necessary to the construction

Method 2

The rug described, 50 in. 30 in, is of felt

The type of design suggested for the previous rug is capable of great variety by changes of

Appliqué Rugs   Method I

FIG. 2

Fig 4 Full size

Fig.5 Full size

Fig.3 fold as Fig 2 A B.C.D

Then E →

Cut on dotted lines
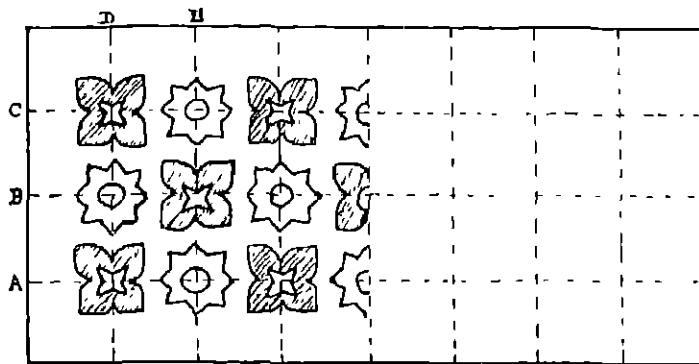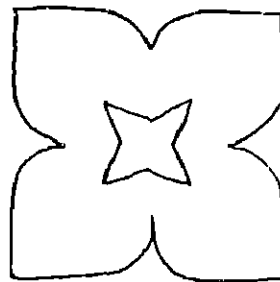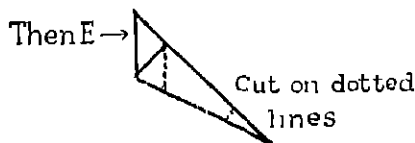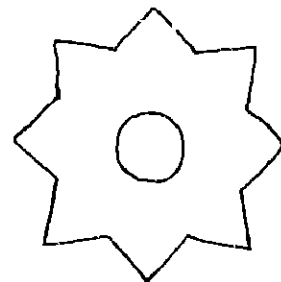
FIG. 1D *opened out*

FIG. 3 *opened out*

plied *motifs*; this must be pasted on thin brown paper and allowed to dry thoroughly before use. Place *motif* shown in Fig 1 D on blue hessian, mark carefully around with chalk, and cut out with sharp scissors Do the same with *motif* shown in Fig 3. Now tack in position as Fig. 1 and oversew on with strong thread (Fig 4) When all are in position, the edges should be protected by two strands of velveno or coarse knitting cotton whipped on (Fig 5) Back with hessian and put a line of whipped

colour, proportions of paper shapes, and cutting, it is a very safe method of obtaining a design. But a free design is sometimes desirable and one is here suggested

Start with a piece of paper the exact size of the rug, and measure off a border of 4 in all round Cut eleven pieces of paper of a contrasting colour, 13 in 6 in, fold and cut as Fig 7, A, B, C Stick on these paper shapes above border, starting in the centre of each long side and each short side (Fig 6 shows what will
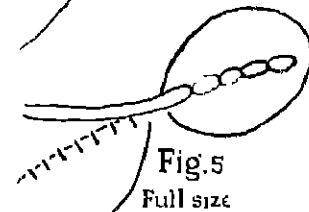
happen at the corners.) They will form a conventional tree or bush border, and there should be one paper shape left over for cutting material.

Now draw the animals: cut 6-in. squares of paper, fold them in six each way for guiding lines, follow proportionally dotted lines, etc., in

Fig. 9, *A*, *B*, *C*, *D*   Cut the animals out in light-coloured paper—three ducks, three hens, three cocks, and five rabbits; this will allow an extra one for the pattern on material. Stick animals in position as shown in Fig. 6, cut out moon and stars, and stick in position.

FIG. 6

Paper flat

A

Folded once

B

Opened out

C

FIG. 7

A

B

C

D
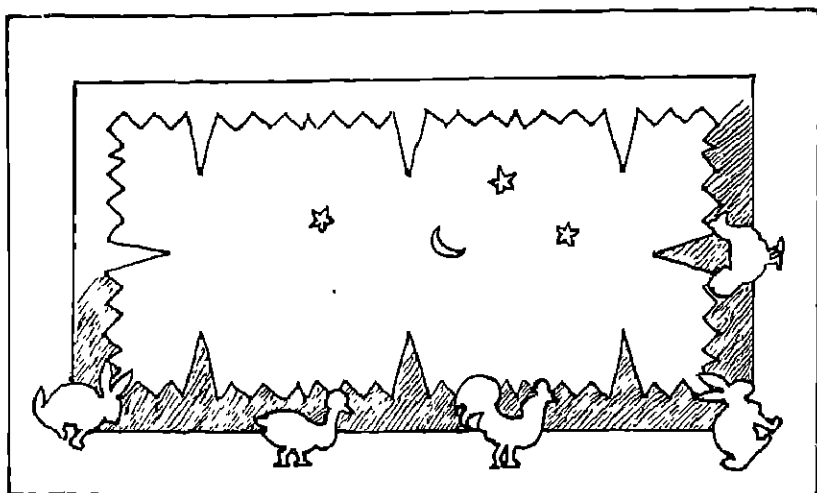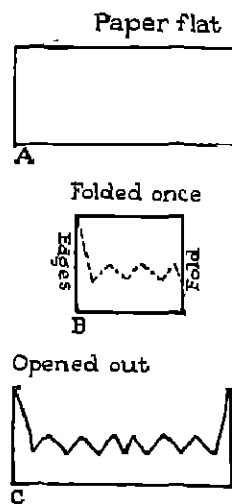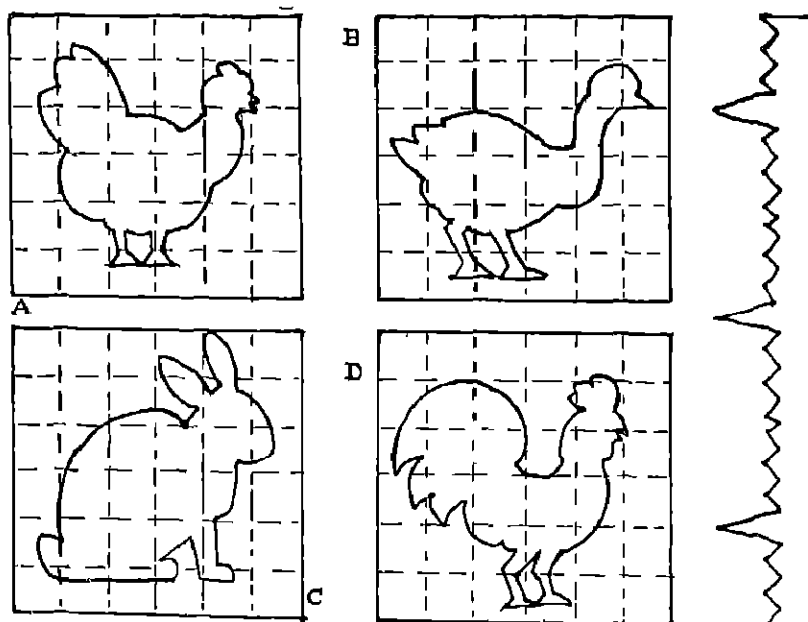
FIG. 9

FIG. 8
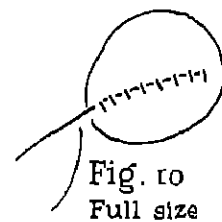
Fig. 10
Full size

Fig. 11
Full size

Appliqué Rugs: Method 2
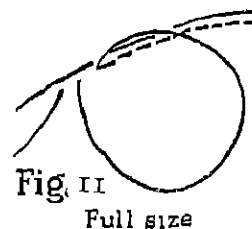
To work, have a piece of deep blue felt, 50 in × 30 in., cut 4 in strips of light brown, and tack firmly in position on edges. Now chalk the middle point of each side and cut out trees and bushes in green felt by drawing round paper shapes These should form a continuous strip for each side (Fig. 8) Tack in place. Now draw around animal shapes and cut out ducks white, fowls yellow, rabbits grey, moon and stars white. Tack all firmly in place.

The edges of the felt may be closely oversewn, as in Fig 10, or back-stitched as in Fig 11, with strong thread. If the stitches are firmly worked, there is no need to protect the edge in any other way The rug should be backed with hessian.

Knitted Rugs

The strips and pieces on which children learn methods of simple knitting make very successful rugs, and the work can be well graded in difficulty. For the following methods, coarse knitting cotton of the kind sometimes used to knit dish cloths is used, and No. 7 needles. The cotton is knitted while in its natural colour, and the pieces are dyed the required colour before the rug is made up. All knitted rugs should be backed with hessian

The four methods described are all composed of small pieces, as this gives a chance of dyeing

Knitted Rugs
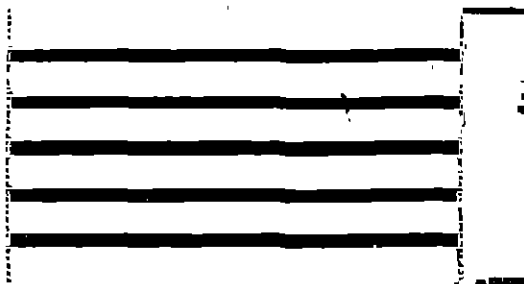
FIG. 12 Method 1

in different colours and also makes it possible for large classes to make a piece or two pieces each, and so soon complete the rug But the same ideas could be adapted to larger strips and shapes by simply adding more stitches if desired

Method 1 Striped Rug, 36 in. × 18 in.

Cast on 16 stitches and knit two strips of plain knitting or garter stitch, each 18 in. long, cast on 10 stitches and knit two strips of 28 in These are for the sides; dye them black Now cast on eight stitches and knit four strips of 28 in, cast on 4 stitches and knit five strips of 28 in. Dye the narrow strips red and the wide strips black Oversew together (Fig 12), using same knitting cotton and a coarse needle.

Method 2 : Checked Rug, 32 in. × 16 in.

Cast on 12 stitches, knit 12 rows of garter stitch, then cast off; this will produce a 3 in.
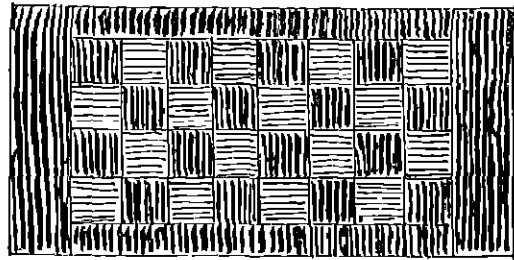
FIG. 13 Method 2

square Knit 32 of these. Casting on 16 stitches, knit two strips 16 in. long, and casting on 8 stitches, knit two strips 24 in. long Dye 16 squares orange and 16 blue; dye the strips blue Oversew the pieces together (Fig 13), changing the direction of the rows of knitting in the alternate squares, so that in two squares of a row the lines of knitting are horizontal and in the other two vertical, as lines in Fig 13.
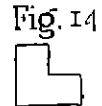
Fig. 14

Method 3 Dovetail Rug, 48 in × 22 in.

Cast on 16 stitches, knit 8 rows, cast off 8 of the stitches, and knit the remaining stitches for 8 rows The result will be a piece the shape of Fig 14.

Knit 60 of these; dye 30 red and 30 grey Join them as shown in Fig. 15. Knit strips for edging as described in previous method; these should be dyed grey and joined on.

Method 4 Triangle Rug, 18 in. × 26 in

Cast on 2 stitches, then turn, and knit 1

make 1, knit 1. Turn, and knit 1, make 1, knit 2 Continue in this way, making a stitch after turning and knitting one in every row,
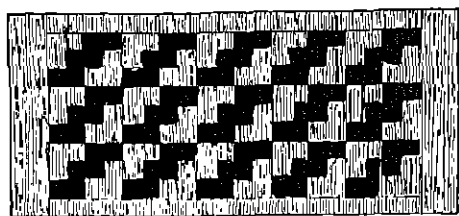
FIG. 15
Knitted Rugs: Method 3

until there are 15 stitches on the needle; the result will be a triangular piece with holes on each lower edge caused by the made stitch (Fig. 16).

Fig. 16
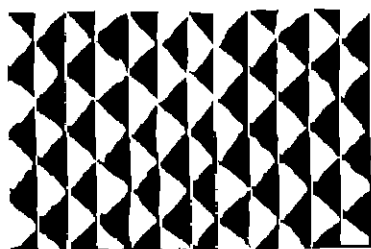
FIG. 17
Knitted Rugs: Method 4

Knit 84 of these pieces and 24 of half the size. Dye half green and half fawn. Join as shown in Fig 17, back with hessian, and bind the edge with plain green carpet binding.

Thrift Rugs

Being able to make use of certain parts of worn-out garments and produce thoroughly successful articles has a great value from both practical and character-training points of view But it is not always easy to find suitable articles and methods Rug making, however, opens up many opportunities.

Method 1: *Old Stockings Rug,* 38 *in.* × 20 *in*

With little effort on the part of the teacher, a surprising number of stockings with quite good

legs and worn-out feet can be collected. These make excellent rugs and even used in their natural colours, which will probably be beige, flesh colour, grey, and black, are quite satisfactory If brighter colours are required, the lighter stockings should be dyed before they are prepared for use in any other way

Thrift Rugs

Method I
Fig 18

Crochet in progress
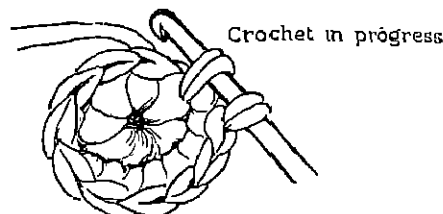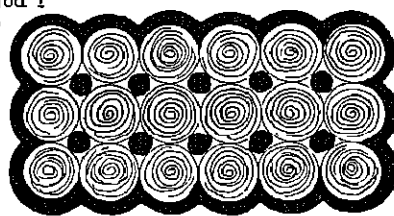
FIG. 19

Method II
Fig. 20

Half of Rug

Method III
Fig. 21

Half of Rug

To Prepare Cut off the foot and cut or rip the hem at top Now start cutting round and round the leg from the top in a strip about $1\frac{1}{4}$ in. wide in a silk stocking and $\frac{3}{4}$ in to 1 in in a thicker stocking. As the strip falls from the scissors it will become tubular One stocking will make a strip about 12 yd long Cut up a number of stockings in this way, join the lengths neatly with a needle and matching cotton, and make into a ball. This is made up with a Stratnoid crochet hook, size 7 (Fig. 19)

Thrift Rugs

Method IV　　　　　Fig. 26

Fig. 22

6
6"

Fold　Fold
Fold

B
cut on dotted lines

A

opened out
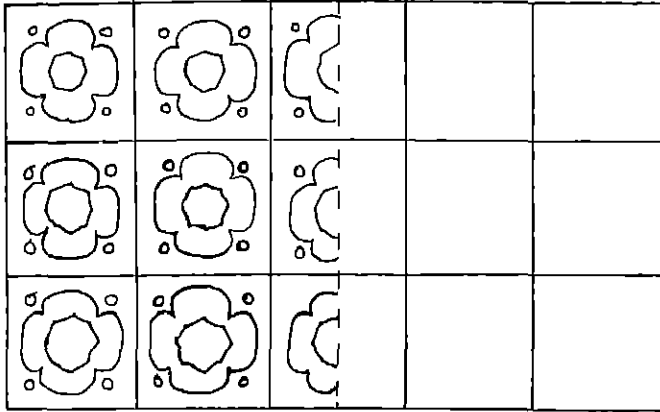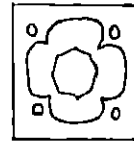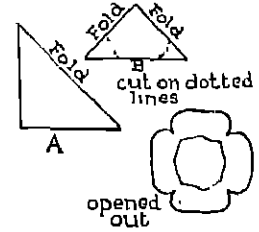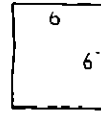
Fig. 23

Fig. 24
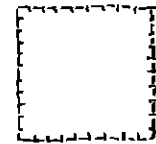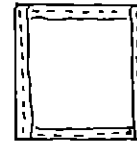
Fig. 25

Method V　　　　Fig. 30

B

A
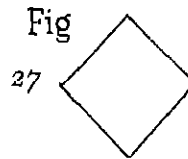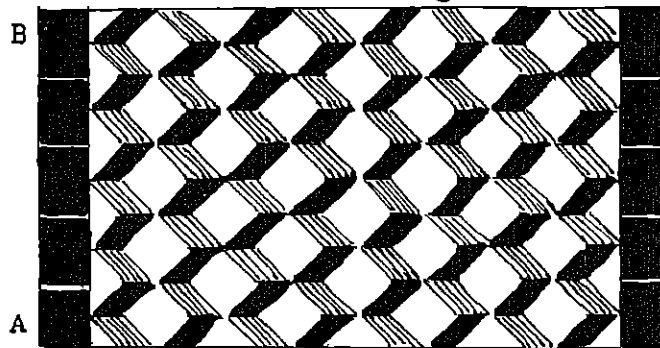
Fig. 27
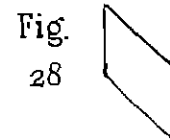
Fig. 28
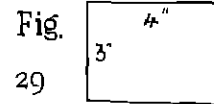
Fig. 29
4"
3"

Method VI　　　　Fig. 32

Fig. 31
3"

Wrong Side
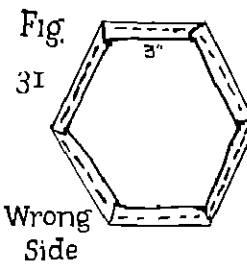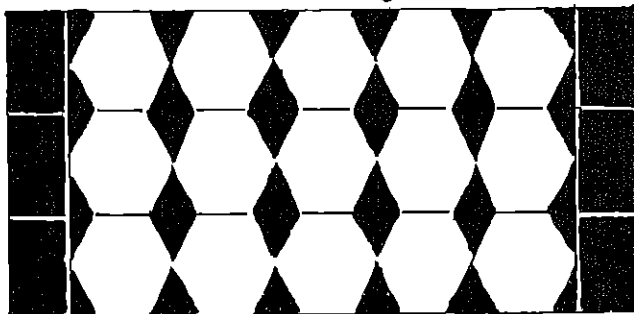
Make four chain and join into a ring, fill tight with double crochet, then crochet round and round, working two double crochet into one as required to keep work flat. Continue in this way until the circle measures 6 in. across. Make 18 of these circles in beige colour, fasten off the crochet of each circle in the ordinary way, and sew the cut end of the stocking strip firmly to the back with strong thread. Make ten smaller circles in black, 2½ in. across, oversew these circles together from the back, as shown in Fig 18, and work two rows of double crochet all round the edge, working two stitches into one where required to keep the rug flat Back with bright coloured hessian, which will show a little between the circles and brighten the rug

Method 2: Old Stockings, Circular Rug, 34 in. Diameter

Start as in Method 1 and work till circle is 12 in. across, then continue working until a large circle 34 in. across is obtained, adding extra stitches where required to keep work flat and changing colour as indicated in Fig. 20 Beige stockings, if dyed red, go a sort of plum colour, and this method makes a delightful rug in beige and plum colour.

Method 3: Old Stockings, Oval Rug, 37 in. × 20 in.

Work 15 chain, turn, and work a double crochet into every chain, but three double crochet into chain next to last, and four into last to turn end. Work up other side of chain, making three double crochet into first chain, and working extra stitches to turn end flat Work round and round in this way, changing colour, as shown in Fig. 21

Method 4: Quilted Rug, 40 in × 24 in.

Materials Old sacks which have been well washed, and any strong cloth from old garments, No 5 Star Sylko

These rugs are excellent for bedside rugs on linoleum covered floors. Cut thirty 10-in. squares of sacking and fifteen 10-in. squares of cloth; the latter may be all one colour or seven light and eight dark, according to the material at hand. The cloth squares may be made up of two or more pieces joined and pressed if it is found difficult to get 10-in. squares from worn garments.

The pattern is obtained by paper folding. Cut a 6-in. square of paper, fold and cut as shown in Fig. 22 *A* and *B*, open out paper and place it on centre of a piece of cloth (Fig 23) Draw carefully around edge of pattern with chalk, then paint outline with white paint. The small circles in corners may be drawn either freehand or by marking round a small coin placed in position.

To work, lay cloth on one square of hessian and tack round centre on right side; now turn to back and tack down 1 in. turning all round (Fig 24). Place second piece of sacking on back and tack in centre; turn this edge to edge with cloth and tack and oversew all round so that there is a square composed of three thicknesses which looks like Fig 25 on each side, except that the pattern will be on one side. Turn to the right side and back-stitch every part of pattern, taking the stitches right through.

It is suggested that the cloth in the rug shall be in tones of grey and black, and that the quilting stitches shall be one square orange and one jade green. When all the squares are quilted, they should be strongly oversewn together from the back (Fig. 26), and the whole have an extra backing of sacking.

Method 5: Old Felt Hats

A collection of discarded hats is first made; the softer kind are best. Remove any wire stiffening or lining, the hats are then cut in pieces, which may be strips, squares, or oblongs, according to the shape of the hat For this cutting no marking out or great care is required, as the hats are simply cut to get them into manageable pieces for soaking and pressing Soak the pieces in tepid water for half an hour, keeping each colour in a separate bowl, so that the colours will not run together. Spread out the pieces between two old dry towels, and thoroughly wring either with the hands or by passing through a mangle or wringer. Leave until half dry and then press flat with a hot iron

The design is planned by means of templates, and it will be found an easy way of

Stitch Rugs on Canvas

Method I   Fig. 33

Full size
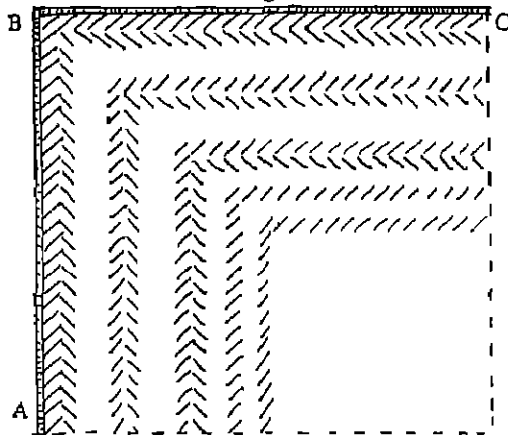
Fig. 34   Fig. 35

Fig. 36

Plain part to represent lighter wool
canvas should be entirely covered with stitch
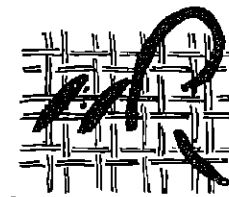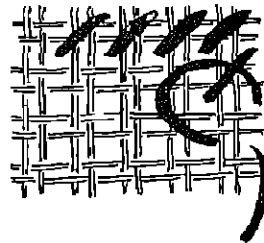
Method II   Fig. 38
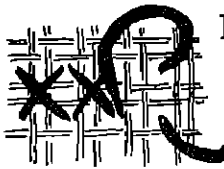
Fig. 37

Fig. 39
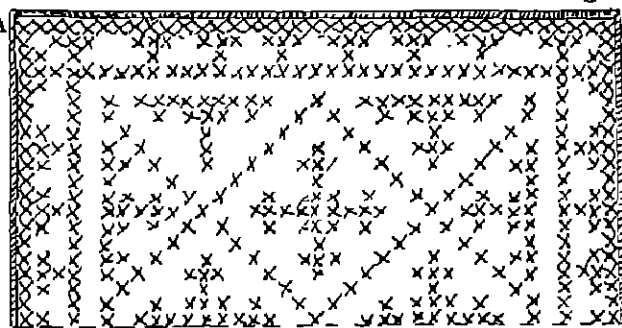
Method III

3 squares = 1 in
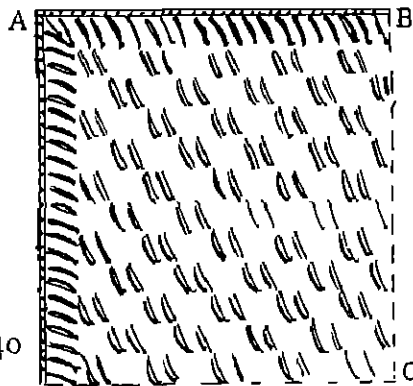
Fig. 41

Fig. 40

Fig. 42

Lines of stitchery Blue   Plain part
Grey same stitch
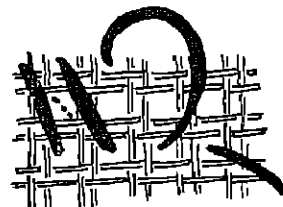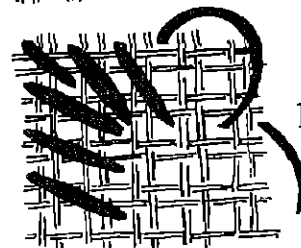
building up patterns to make a number of cardboard squares, triangles, diamonds, hexagons, rectangles, etc., and keep them in a box ready for use

Use a square template (Fig. 27), lay it on light-coloured felt, mark round with chalk, and cut out (no turnings) 32 whole squares, 14 half squares, 4 quarter squares. Now use the shape in Fig. 28 to cut out 40 blue and 40 grey Using the shape in Fig. 29, cut 10 pieces in black. Fit together by tacking in position on cheap calico (Fig. 30), starting on a tacked line corresponding to AB. When all are in position, oversew from the right side with strong thread; do not take the stitches through the calico backing, which, when all are oversewn together, is removed, the side which was against the calico being taken for the right side. The side with the oversewing is backed with strong material to prevent rubbing.

The success of this method depends a great deal on the careful cutting of the parts One of the difficulties is that, of the hats collected, it is unlikely that there will be any two of one colour; but it is surprising how effective these rugs can be when from necessity, instead of all black, black, grey, and dark brown are used for one part, and, instead of all blue, several shades of blue and even mauve are used together.

Method 6: Patchwork Rug

The cloth for the patchwork is cut from worn garments. Templates are again used for the design. Cut, in strong brown paper, 15 hexagons of 3 in. side, 8 diamonds formed of two equilateral triangles of 3 in. side, 8 half diamonds lengthways, 8 half diamonds widthways, 4 quarter diamonds, and 6 brick shapes 6 in. × 4 in.

Now cut the hexagons and brick shapes in dark cloth and all the diamonds in light cloth, allowing ½ in. turnings. Tack each piece of cloth to a piece of paper, tacking in the centre of the shape. Take ½ in. turnings to the back and tack very accurately round each shape (Fig 31)—a lot depends on the accuracy of this tacking, and it is a good exercise for children. When all are tacked, fit them together in correct order, as shown in Fig. 32, pick up piece by piece and oversew from the back. When all are together, press

from the wrong side and back with strong material, take out all tackings, but the paper will not move as it will be caught at the edges with oversewing stitch

Stitch Rugs on Canvas

Any of the shorter simple canvas stitches can be adapted to rug making, but no long stitch must be used as it would not stand wear.

The canvas stitch methods described are worked out on ordinary double thread rug canvas, in 6-ply rug wool or, if economy is an important factor, thrums left from carpet weaving, which can be obtained very cheaply. Wool unwound from worn knitted garments will work well if sufficient strands to equal the rug wool are used Method 4 is worked in knitting cotton.

A large bodkin is the best needle to use, and for starting and finishing simply leave an end of about 2 in., which should afterwards be sewn firmly to the back of the worked stitches. These rugs need no backing. It is best to turn a narrow hem on ends of rug, and, having the correct width canvas, use the selvedge at sides; whip this over and over with wool worked close to make a firm edge before starting actual rug stitch.

Method 1: Rectangular Rug, 36 in. × 18 in.

This is worked in half cross-stitch over one intersection of canvas The stitches should not be pulled too tight. Fig 34 shows stitch being worked toward the right; Fig. 35, stitch toward the left, Fig. 36, stitch turning corner; Fig. 33, pattern for quarter of rug, AB showing quarter the width, and BC quarter the length The rug looks well in grey and blue.

Method 2: Rectangular Rug, 22½ in. × 18 in.

Use cross-stitch over one intersection of canvas. Fig 37 shows pattern of mat, AB being the width and BC quarter of length plus border Figs. 38 and 39 show working of stitch. Black and orange is a suitable colour scheme

Method 3. Rectangular Rug, 32 in. × 14 in.

Use gobelin stitch Fig. 40 shows pattern of rug, AB being quarter the width and BC quarter

the length. Fig. 41 shows working of stitch, and Fig. 42 turning of corner.

Method 4. Rectangular Rug, 32 in. × 18 in.

Use of double cross-stitch in knitting cotton. Fig 43 shows pattern, *AB* being half width, *BC* quarter length. Fig. 44 shows the stitch.

Method IV
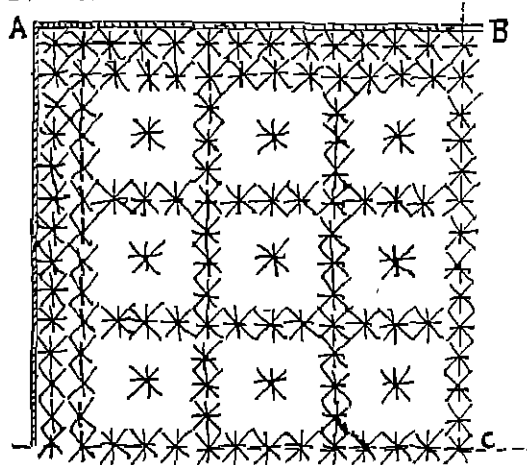
FIG. 43

FIG. 44

Stitch Rugs on Canvas

To work it, make an ordinary cross-stitch over two intersections of the canvas, bringing the needle out at *A* instead of at lower corner, continue as shown in Fig 44

Stitch Rugs on Plain Material

About the quickest and simplest of all rugs is that made on strong jute fabric with a simple embroidered pattern in jute yarn. Back-, running, cross-stitches and any others which will form a square are the most suitable

Method 1 : Embroidered Rug, 24 in. × 16½ in.

Have jute fabric required size, hem with strong thread, and work pattern in back- and cross-stitch, copying Fig. 45, in jute yarn, orange and blue. It is quite easy to follow these square

Stitch Rugs on Plain Material

Method I
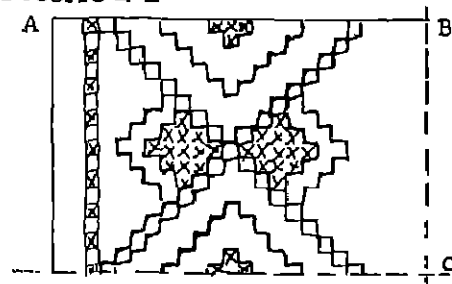
FIG. 45
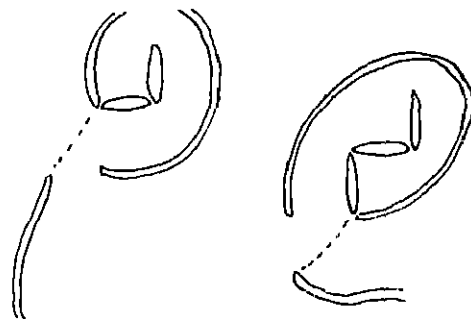
FIG. 46

patterns by the threads of the jute fabric Use a large darning needle. Fig 46 shows working of back-stitch on diagonal of fabric These rugs need no backing

Method 2 : Chain-stitch Rug on Red Baize, 40 in. × 20 in.

On a piece of baize the required size, chalk a line 2 in. from edge, and another 1 in from this for border; measure divisions on border and mark with pins Tack lines with white cotton. Now fold and mark corner diagonals (*AC* and

BD, Fig. 47). Take a 1-lb jam jar and place it 1½ in. from corner of border on one diagonal; mark round with chalk and place the jar in other positions and mark round as indicated in Fig 47

FIG. 47   FIG. 48
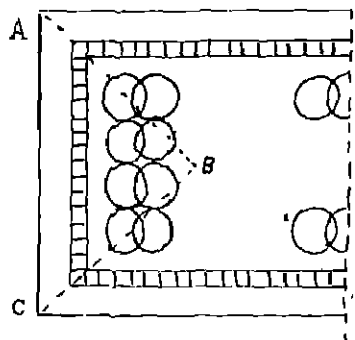
Stitch Rugs on Plain Material. Method 2

Tack all outlines of pattern, and when complete work chain stitch outlines in No 5 Star Sylko (Fig 48). Back the rug with hessian—remove all white tackings.

Pile Rugs on Canvas

These rugs are very popular at present. The short-pile methods will be found most practical for Juniors, as mats with a long pile, although handsome, are heavy to handle and very expensive as to material. The plain rugs are best made with cable wool, and the patterned ones in six-ply Rug Wool or carpet thrums used several strands together. Ordinary Rug Canvas forms the foundation, and for the edges it is best to turn a hem, getting the lines of the canvas exactly on each other, and work through the threefold thickness. These *rugs need no* backing.

Method 1: Long Pile Rug, 42 in. × 32 in.

Either ordinary or spring hook may be used (Fig. 52, A and B). Wind wool on gauge (Fig. 49), cut on dotted line; the wool will now be in lengths as A; double in half as B. Fig. 50 shows knot: A hook in position, B hook pulled through, C complete knot with ends D and E pulled through F. Fig. 51 shows pattern for rug—four knots equal one square on paper. The knots are

worked in rows and the colour changed according to pattern.

Method 2: Short-pile Rug, 53 in. × 39 in., made with Needle

Tools are wooden gauge (Fig. 53) and raffia needle. Place wool under gauge and take it under single thread of canvas toward the left (Fig. 54 A). B shows second stage of stitch, and C one stitch or knot complete and start of next. Fig. 55 shows several complete knots; when the whole length of the gauge has been covered, it is pulled out and laid down again, and when the row is finished, the loops are cut with scissors Fig. 56 shows pattern suitable for this method or Method 3. There are four knots to one square

Method 3: Use of Litchfield Needle

Use the Litchfield needle (Fig. 52 C), and gauge as Method 2, but ⅜ in wide, wind wool on gauge and cut. Thread needle with fine, strong string Fig 57 shows needle pulling wool through canvas, Fig 58 threading string through loop of wool, with finger and thumb of left hand holding ends of wool; Fig. 59 shows series of loops threaded on string. There is no special pattern for this rug, as these pile rugs can be worked from any pattern built up of squares, and the pattern in Fig. 56 may be used

Method 4: Use of Locker-stitch Needle

Wind wool into ball; thread end in Locker Needle, but do not cut off length; bring needle through canvas at starting point (Fig. 60 A). Pass hook through next hole in canvas to the back and pick up loop after loop of wool, somewhat as in crochet, until there are eight or nine loops on needle (Fig. 60 shows this in progress); then thread through as Fig. 61. This can hardly be called a pile rug, as the wool is not cut, but the stitch makes a firm and beautiful surface not unlike tent-stitch embroidery. Fig 62 shows several rows of stitch and the turn Patterns, as in ordinary pile rugs, can be easily followed by having two or more balls of colour underneath canvas and picking up the various colours as required, somewhat as for pattern work in knitting.

Pile Rugs on Canvas

Method I

A   B   C

D   Fig. 52

6" Long

Hooks for
long pile Rugs

Litchfield
needle

Locker
needle

Raffia
needle

A   B

Fig. 50

D   E   B   C

Fig 51

Fig 49

Plain part grey.
Dark part blue

Method II

Fig 53 full size   section

8" Long

Fig. 55

A   B

Fig. 54

c

Fig
56

Method III

Fig. 57   Fig 58

Method IV

Fig 60

A

Fig. 59

Fig. 61

Fig. 62

Chenille Rugs

Fig. 63

Right side

edge
edge

Fig. 65   Method V

Fig. 64

edge of
Rug showing
sewing on
of second
Row
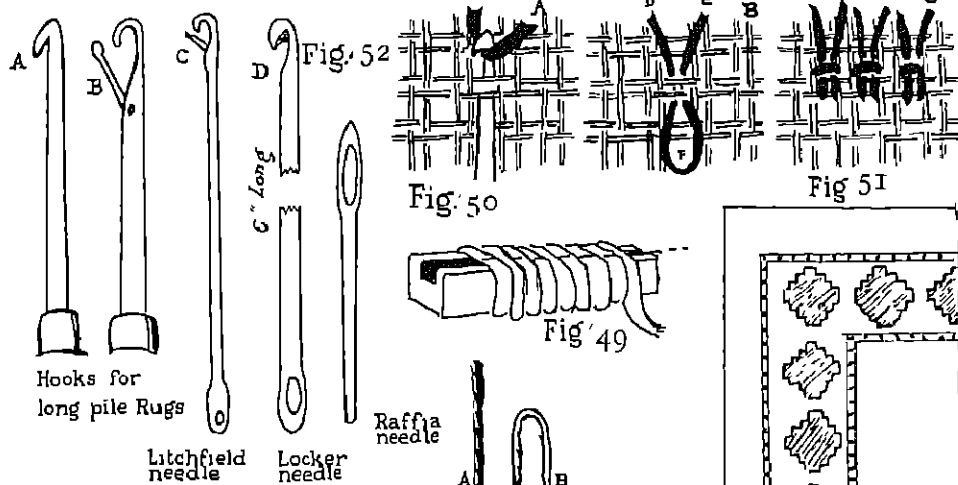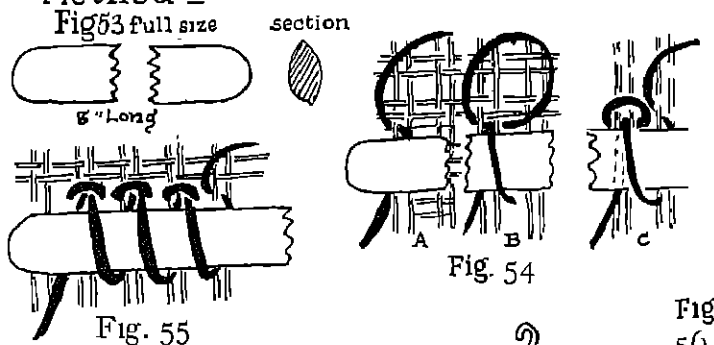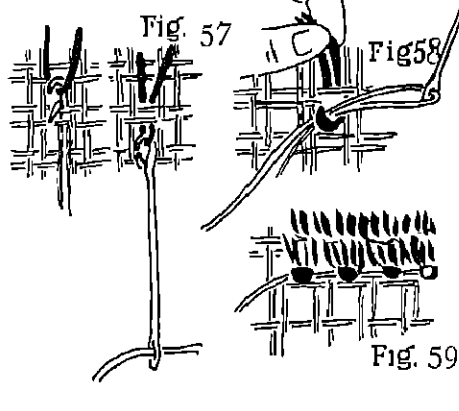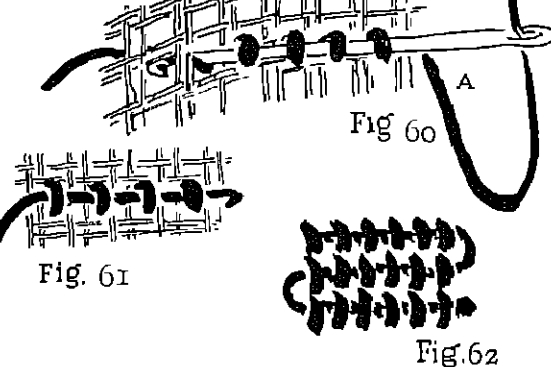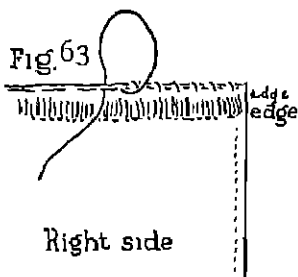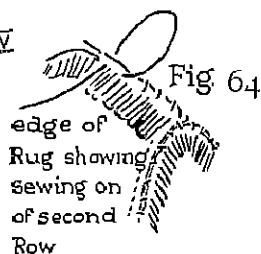
Needle Woven and Woven Rugs

Method I

A

B

Fig 66

A   B

Fig. 67

Fig 68   Half of Rug

Method II

Fig. 69

A   B

C   E   D

Fig. 70
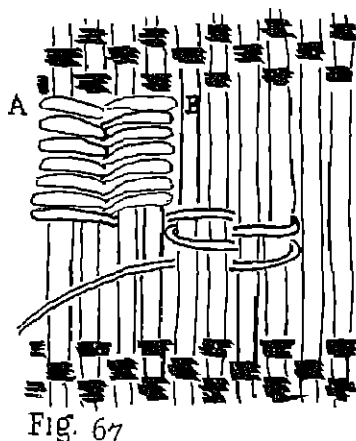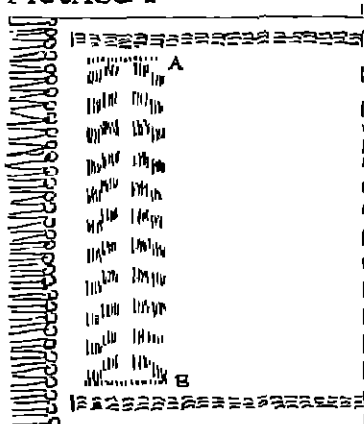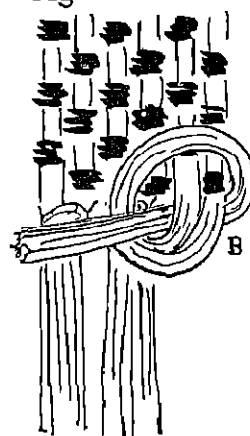
Method 5: Chenille Rugs

Left-over pieces of chenille can be obtained very cheaply and quickly produce a very good short-pile rug

Have a piece of hessian the size of the rug, hem edges, and, holding chenille and hessian, as shown in Fig 63, oversew with strong thread; go right round edge of rug, putting necessary fullness to turn corners flat. When row is complete, make a fold about $\frac{1}{4}$ in. away, and sew on another row. Fig 64 shows this in progress, go round and round until the rug is complete. Fig 65 shows quarter of the rug By sorting chenille into colours and having a pattern painted on hessian which is followed line after line according to prearranged design, very handsome
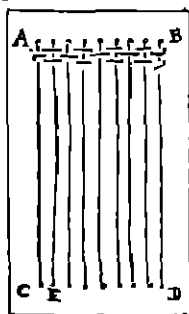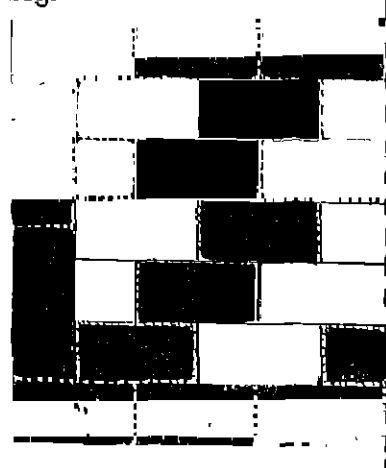
rugs can be made, but the result is quite good if the chenille is sewn in variegated colours as they happen to come without any pattern.

Needle-woven and Woven Rugs

In grading weaving up through a school, rug making may well form part of the scheme

Method 1: Needle Weaving.

The ground material is very important; Swiss canvas, of which Fig. 67 is a full-size diagram, is the best For the weaving use jute yarn It is essential that the warp threads run lengthways in the rug. On canvas 46 in × 30 in. turn and hem 1 in hems on sides. Draw out six brown blocks of thread above side hems, fringe ends for 3 in , and knot (Fig. 66, B) Leave a space of 2 in. above fringe, then draw out six brown blocks; leave 1 in. space and repeat. Weave border, as shown in Fig 68 (method, see Fig 67) in orange and blue. The orange weaving will start at Fig. 67 B exactly as the blue has started at A. Weave alternate blocks of orange and blue on drawn threads at sides of rug. In drawing threads for borders across rug do not take them right across, but stop at points corresponding to Fig. 68 A and B, and firmly buttonhole cut ends

Method 2: Cardboard Loom and Jute Yarn

On a piece of stiff cardboard, 10 in. × 6 in , rule a margin of 1 in., and measure ½ in divisions on lines AB, CD, Fig. 69 Bore holes through at divisions. Now make warp, using soft string. Bring needle through at A, using a large knot, which can afterwards be untied, and leaving a long end, which can be threaded through when weaving is finished. Pass needle to the back at C and bring to the front at E. Continue in this way until all the holes are filled and loom looks as Fig. 69 Now do plain weave simply under and over each warp thread, using a bent raffia needle Weave 24 rectangles, two half size, and four longer ones for ends of · rug in green, and 11 rectangles and two half size in yellow. Thread all ends and oversew together, as Fig. 70. Back with hessian.

Purchase of Materials

It is very important that correct materials be used for the various methods described. Also, if the craft of rug making is to be successful and profitable in a school, that these materials be obtained as cheaply as possible. The following list may, therefore, be helpful—

Appliqué Rugs. Method 1. Coloured hessian and velveno from *The Needlewoman*, 126 Regent Street, London

Method 2 Coloured felt from The Dryad, Handicraft Dept , 42 St. Nicholas Street, Leicester

Knitted Rugs Methods 1, 2, 3, and 4 Knitting cotton from Cox & Co., 99 and 101 New Oxford Street; for dyeing use *Drummer* dyes

Stitch Rugs on Canvas Methods 1, 2, 3, and 4, and *Pile Rugs on Canvas*, Methods, 1, 2, 3, and 4 All rug canvas, six-ply rug wool, carpet thrums and chenille from The Newcastle Wool Co., 160 New Bridge Street, Newcastle upon Tyne. All special needles and hooks, wools, linings, and bindings from Messrs Hammonds, Paragon Square, Hull

Stitch Rugs on Plain Material Method 1. Jute yarn and jute fabric from The Dryad, Handicraft Dept (as above)

Needle-woven Rugs Method 1 Swiss canvas from Messrs Hammonds of Hull

Any materials named in the various methods which do not appear in the above list can be obtained from the ordinary local drapery or house-furnishing shop Prices of materials have not been quoted, as any of the firms mentioned will send most comprehensive price lists and patterns on receipt of a post card

BEADWORK

IT has been said that art is a part of childhood's kingdom, if indeed it is not that kingdom itself.

Beadwork is one of the artistic crafts, co-related to the other branches of school handwork, drawing, needlework, basketry, etc., and admirably adapted as a practical and fascinating subject for the thoughts and fingers of children of all ages.

The egg breakfast table basket shown in Fig. 1 gives one example.

The small flowering plant in Fig. 1 is made from one of the wooden egg cups used with the breakfast egg basket. The curving stems are made from thin strips of cane, measuring about 6 in. long, and dyed to a leaf green shade. The little cup is filled with one of the modelling pastes and the strips of cane simply pressed in. The weight of the paste serves as ballast to keep the small pot solidly upright. The flowers consist of small flat beads, shaped at the edge, as shown in Fig. 1; they do not cost very much, and are supplied in a variety of colours and sizes. Each flower is made of two beads, a larger and a smaller one of different shape and contrasting colour. They are pressed on to the top of the cane stems and the tips opened a little to keep them in place.

Bead manipulation constitutes an excellent finger exercise and channel of self-expression. It gives a free hand in the art of design even to little children. For from the very beginning, in the simple process of the arranging and threading of the beads, in the choosing and blending of the colours and shapes in forming their first little bracelets and necklets, the first principles of order, balance, and proportion are, however unconsciously, inculcated, together with the ideal that the aim of all decoration should be to enhance but never to take away from the usefulness of the article, and that nothing should be over-decorated.

The infinite variety of beads and of their uses makes beadwork a craft of unlimited scope and interest.

Necklaces

The top line in Fig. 2 shows a few of the ordinary nature forms, beans, berries, nuts, that so greatly attract children in making their first little chains and necklets. Dried, bored, dyed or painted in bright colours, pink, mauve, blue, green, orange, red, brown, and so on, these make pretty beads. Some of them, like the French bean, for example, have beautiful delicate rose,
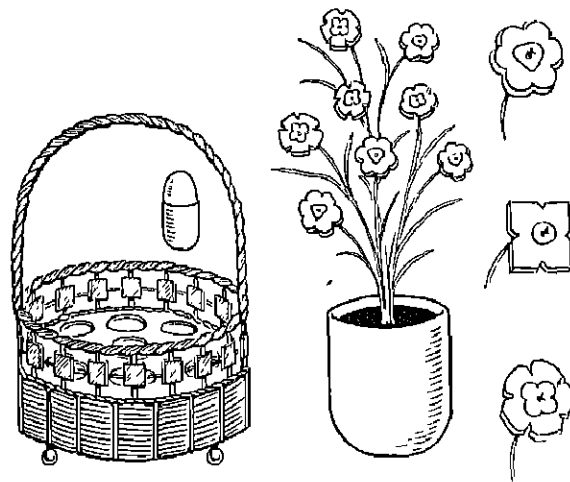
Fig. 1

Bead Decoration for Baskets, etc.

mauve, and other variegated natural tints of their own Children should learn to appreciate these lovely tints and shadings that Nature has painted upon her offerings. The rose hip, oak apple, acorn are all "richly adorned" all that they really need is a little extra sheen which can be given them quickly by rubbing in a soft cloth sprinkled with O'Cedar or other oil, and finishing with a dry polisher

Where colouring is required dyeing is a simple and quick method: Drummer, Fairy, or any of the ordinary makes will do. Prepare the dyes in a number of receptacles, each holding its own colour, in sufficient proportion to cover the beads, and leave them in overnight. When thoroughly

diy they also may be given a polish with the cloth.

Boiing can usually be done quite easily with a file tang, the soft end of a small thiee coinered file. If the beans, etc., have become veiy hard it is best to use a hot knitting needle. Covei the
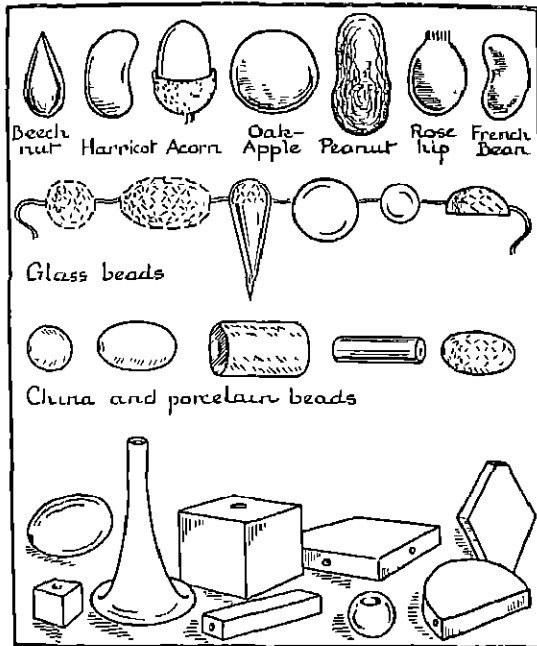
FIG. 2

Nature Forms and Coloured Beads

end with cloth so that it foims a handle, and heat the steel sufficiently to burn thiough the mateiial without too much forcing.

Colour Combinations

Fig 3 shows four small necklets, attiactive and easy foi little fingeis.

A consists of plain ruby tinted glass beads.

B, glass opaque china beads, oval shaped, with smallei emerald glass ones between

C. Here the ovals aie jade green, and the small iound ones between are cleai glass.

D. Variegated colouis aie used in this, blue coral, amber tinted, and ied. The laige facet bead joining the double string is green The front centie beads aie giaded in size.

Childien love biight colours. Blue and ied beads aie great favouiites with the little ones. Of all the colouis of the rainbow, we aie told, blue is the happiest. Blue is said to inspiie and chaim. Red is believed to act as a stimulant that thiills and quickens. It has been called a sacied colour, because it is a symbol of the blood-tie that links all Eaith's children in the bonds of brotheihood.

The colom instruction given in the Infant classes will have familiaiized the children with the primaiy and secondaiy colouis, and so enable them to make many pretty and haimonious blendings in their beadcraft exercises
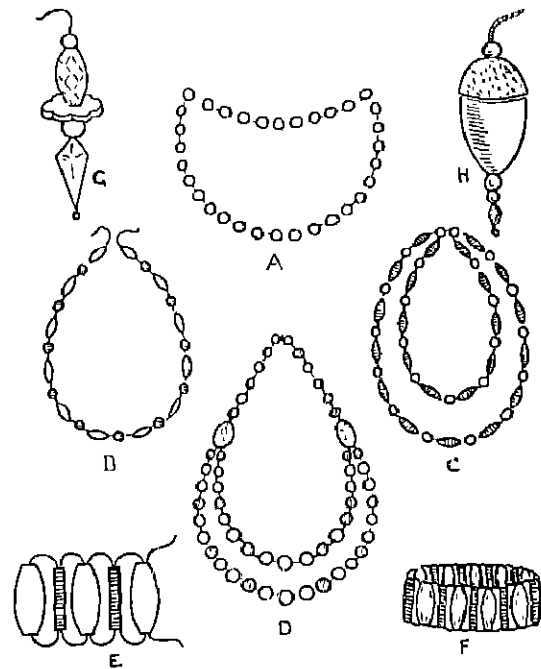
FIG. 3

Simple Necklets, Pendants, and Biacelets

The small biacelet, *F*, Fig. 3, is veiy simple to do. *E* shows it in the piocess of thieading This is an example of the many pretty biacelets and necklaces that can be foimed with long shaped beads and bugles. In stiinging, the thiead is passed thiough the hole fiom both ends, the two threads qossing each other inside

the bead, as the illustration shows. When the last bead is threaded the ends are passed through the first bead again and knotted firmly. The knot falls into the hollow between the two beads and is thus concealed.

The two necklets in Fig. 4, A and B, show a variation by adding the small pendent drops. This is a slight step in advance in threading and arrangement of the beads. A is composed of oblong and oval beads alternately placed. The oblongs are blue opaque beads, the ovals clear glass. The large cut glass bead at the centre front is a deep amber colour, just like a brown diamond. The small round drop beads are also clear glass.

The method of threading the necklace pendants is as follows: the end of the thread will be tied to a small metal clasp, and the oval bead threaded first, then the oblong, and so on, alternately, till the half of the beads are strung. Then the large centre bead is threaded, and one of the oval drop beads, and the small round one underneath it. This done, the needle is passed back through the oval bead and the thread pulled up tight, which makes the first little pendant drop. Next the four round beads are threaded and the needle passed back through the largest one and the two small ones above, and again the thread pulled up tight, forming the second pendant drop, and so on till the five drops are completed. Then the remainder of the necklace is strung.

In B the square beads are of wood, painted deep gold, the small beads between bright red, the three bugles, mauve, the round drop ones red. The pendant beads here are threaded just in the same way as at A

In this simple manner of threading, all sorts of varied bead pendants can be prettily arranged at the front of necklaces. Drop beads arranged all round a necklace make a dainty variation, the drop beads in a vivid contrast to the straight ones, emerald and indigo blue, or garnet red and crystal, for instance

Another style of necklace can be made by threading a length of small beads and dividing it
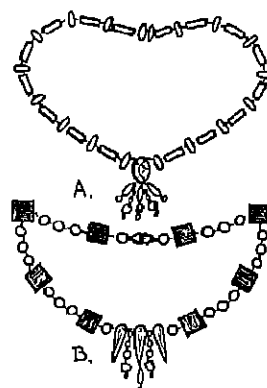
FIG. 4

Necklets with Pendants

into three or more rows, then drawing them between a large bead at given intervals all round.

For stringing purposes it is well to use the proper bead thread which can be procured in various colours Or a strong, firm linen thread well waxed, is good. The ordinary embroidery thread can, of course, be used, in which case it should be doubled over in the needle for strength. The threads must be cut long enough to tie at the back and a knot made, or the needle passed twice through the first bead to hold it in place whilst threading.

Round millinery elastic does also very well for threading, when the little necklet can be slipped over the head.

BEADS IN NEEDLEWORK

The two tiny bead drops at the top of the sketch, Fig. 3, G and H, will serve to suggest the many and varied pendant arrangements that can be formed in this simple and attractive way. And they make very useful and dainty finishings at the ends of narrow, or gathered, waist and neck-tielets, or hat bands, the corners of bags, sachets, pin cushions, wall pockets, studding the ends of lamp and candle shades, etc., such as shown in Fig. 5, for example.

Using harmonious colours and shapes the pendants can, of course, be lengthened and made as decorative as required.

The dainty set of cream and milk jug covers

shown on the diagram (Fig. 5) forms a fascinating little piece of beadcraft for the Junior girl to make at school. Weighted and decorated with blue, pink, or gold beads, they lighten up the tea table as well as serving the hygienic purpose of protecting the milk

material, and, the thread being held about ½ in. from the edge to form the loop, passed back through the bead again and the button stitch continued. The double threading of the bead is required to make the loop strong

The method of working the beads round the
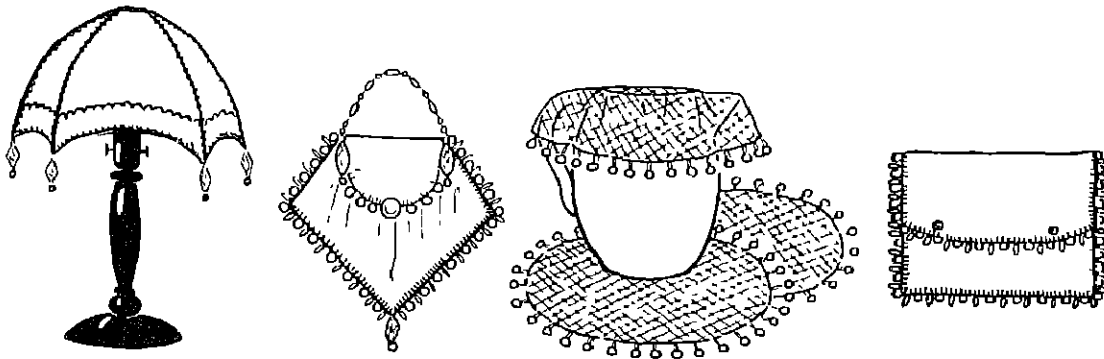
FIG. 5

Beads make Pretty Decoration

In making these the inturned edges are basted neatly first, then worked with button stitch, inserting the beads spaced at intervals of about 1 in. apart. There are several ways of attaching the beads, but the simplest is by threading them in when working the button stitch itself: that is, so many stitches are worked, then the bead is threaded and the needle passed through the

edges of the little purse bag and pochette is just the same as for the jug covers. That is to say, the beads are button stitched on, but here in the working the bead is drawn up close to the edging, and one or two stitches—according to the size of the bead—are worked between each. This is to allow space for the beads to lie close against each other without overlapping.

SIMPLE BEAD FLOWERS

Looped Petals

The tiny looped flowerets shown in Fig. 6 are the first simple form of flower making with beads. Each little petal is composed of a row of embroidery or other small beads threaded on a 6 in. length of floral wire. The threaded beads, measuring about 1½ in. long, are passed to the centre of the wire, bent to the shape of a petal and one or two twists given at the base to keep them in place. Five or six petals are made in this way, the ends are then passed through a larger glass or wooden bead, as shown in the diagram at Fig 6. A single bright coloured bead will serve for the centre or heart of the flower; thread it on to the wire and twist to hold it in

place, then pass the ends through the calyx bead with the petal stems, press the calyx bead up and twist one or two of the wires round the base to hold it firmly. Five or six of such little blossoms will make a dainty bouquet.

To form a leaf bend the centre of a 7-in. length of stiff millinery wire to the leaf shape and thread sufficient green beads on it to cover one side of the shaped portion only, twist together at the stem. Half the beads should now lie on each side of the shape. Take a long length of the finer floral wire and thread several inches of the small beads. Attach one end at the top and begin to wind over the face and round the back, at each turn the wire is twisted round the frame in the manner shown at Fig 6. One of the beads

on the frame will be pushed up between each row of those laid along the face Continue this until the leaf is covered, then twist at the bottom to hold secure For a small bouquet as many leaves may be made as there are flowers. Wrap all the stems together with a strip of crepe paper, or with raffia, silver paper, or embroidery thread.

Covered Petals

Many of the smaller flowers familiar to the children can be quite faithfully reproduced by shaping the petals first with the stiffer wire and then covering with threaded beads in the manner just described. Nature's colourings should be
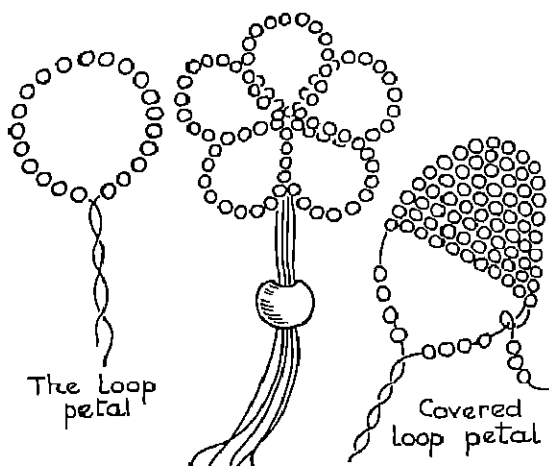
FIG 6

Simple Leaf and Covered Petals

followed as far as possible The shaping of leaves and petals, and the choice of beads for stamens and calyx invite a careful study of the natural forms. The stamens are made in the same way as the flower centre, by twisting a number of small beads separately on to wire stems and passing the ends through the calyx bead with the leaves and petals.

Single-threaded Bead Flowers

Fig. 7 shows the method of forming larger flowers with beads threaded singly to form petals, leaves, and centres.

Begin the leaf, Fig 6, by threading one bead in

the centre of a 9 in. length of fine copper, or floral, wire The double turn of the wire keeps the first bead from moving, and additional rows
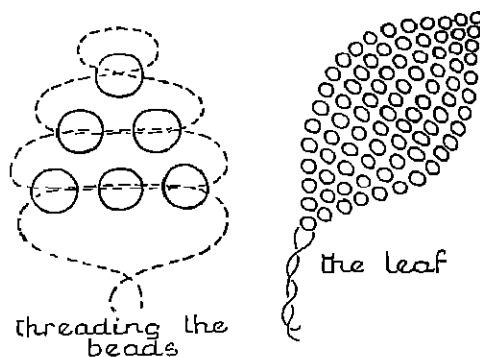
FIG. 7

Threaded Bead Leaf

are added as required—the numbers first increasing row by row, and then decreasing again according to the shape the leaf is to be. When finished, the ends of the wire are twisted together to form the leaf stem. A little spray of 3 or 4 leaves can be twisted together and bound with raffia or embroidery cotton in readiness for binding in with the blossoms

Petals (Fig. 8) are formed in the same manner. The pointed top is begun with a single bead, a rounded or straight top with 3, 4, or more beads in a line, the centre one being fixed in the
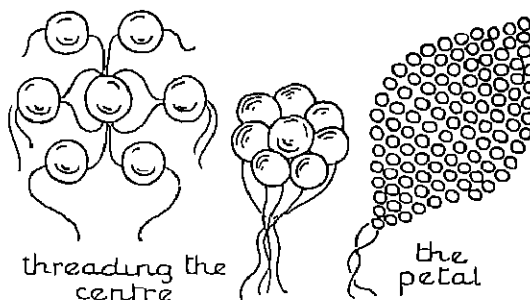
FIG. 8

The Centre and Petal

manner previously described and the first row curved to the shape desired, then the other rows added to follow out the shape of the particular petal. The petals are then bound together with

a little cluster of beads at the centre. Fig. 9 shows such a blossom finished. The centre beads are threaded in the manner shown at Fig. 7. One larger bead forms the centre and 4 or 6

stem-like appearance. Red wooden beads are threaded singly on the ends, and the raffia or
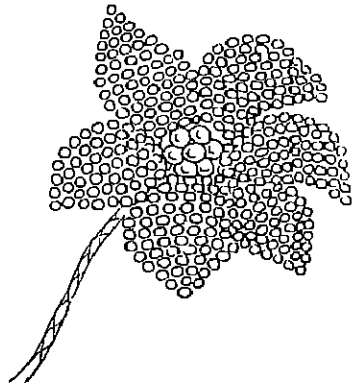
FIG. 9

A Threaded Bead Blossom
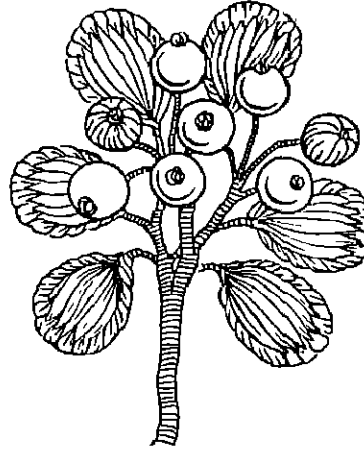
FIG. 10

Leaf and Berry Spray

smaller ones are wired to it. The wires are then twisted beneath to form a stem.

A Simple Spray

The spray of red berries and leaves at Fig 10 will provide an interesting task for young fingers. The stems are made of the stiffer millinery wire, which is afterwards covered with brown or green raffia to give them a natural,

wire lightly pressed into the hole to keep them in place. The leaves can be made by sewing the shape in buttonhole stitch with green raffia on a piece of canvas, then cutting it out and mounting on wire, covering it as the berry stems. Several leaves are bound in to a separate spray, and then berries and leaves arranged gracefully and bound together.

Bead covered leaves are equally suitable for these attractive and realistic little sprays.

MAT MAKING AND DECORATION

Cork Mats

The inset cork mat, Fig. 11, has a thin plywood circular base with holes bored round it at intervals of about ½ in. ¼ in coloured cube beads are fixed to these by simply tapping a wooden peg through bead and hole and cutting it off flush at top and bottom. Before fixing, the base should be stained to the colour it is desired to be, and the shade of the beads chosen in accordance. A dark brown or green base with red beads makes one good and serviceable combination. It will be seen that the cork inset is easily removed from this ingenious mat for the necessary washing.

Fig 11 also shows the method of attaching the same small coloured beads to the edge of the more ordinary cork mat. The buttonhole stitch movement of the needle forms a locking stitch that holds the bead firmly in place. When the edge is completed the thread is fastened off with one or two button stitches and passed back a stitch or two and knotted. These mats can be made to look as attractive as they are useful if the beads are selected in bright, harmonious colourings.

Flat, Wooden Beads

The mats in Fig 12 are made up entirely of

polished wooden beads measuring ¾ in. square by ¼ in. thick. The beads are in varied colours and bored both ways on the flat. Mats are usually formed from squares containing 5 or 7 rows, that is, 25 or 49 beads respectively. We have indicated just one or two of the many simple and ingenious variations that may be introduced with this type of mat, and also the method of arranging the beads to form patterns in colour. The edges may be decorated with half-round beads of the same type, or with the long bugle shape beads. One of the mats shows small square beads placed between each of the larger ones.

A 9 in. long needle threaded with strong, fine
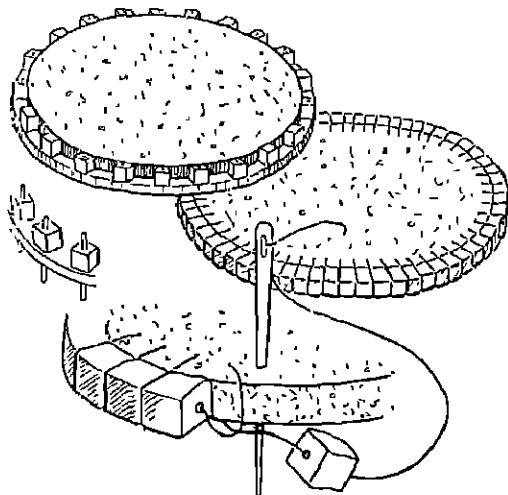
FIG. 11

Cork Mats with Bead Decoration

twine is used for these; it is passed through the first row and then on through the other parallel rows, crossed at the corner, and the remaining rows sewn in the same way. The beads are then pulled tightly together and thread is strongly knotted. It will be found that only alternate edging beads can be taken in with the first sewing. The remainder must be attached with a second sewing.

Mosaic Patterns

The mats in Fig. 13 are made from ½ in. coloured cube beads, bored one way. The method of sewing will be clearly seen from the

diagram attached. The first row is sewn with a long double thread and consists of two beads and one bead alternately until 20 beads deep.
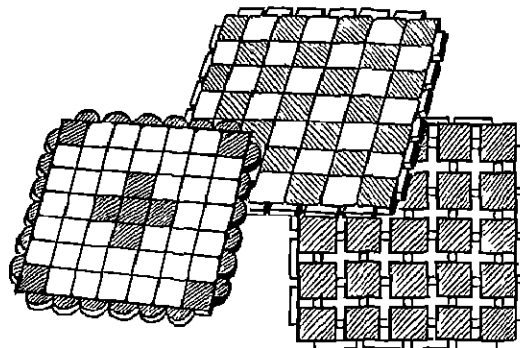
FIG. 12

Mats made with Flat Wooden Beads

The threads are used continuously to sew the succeeding single rows, joins being made when necessary. When square is completed the threads are drawn taut and finished off with a knot.
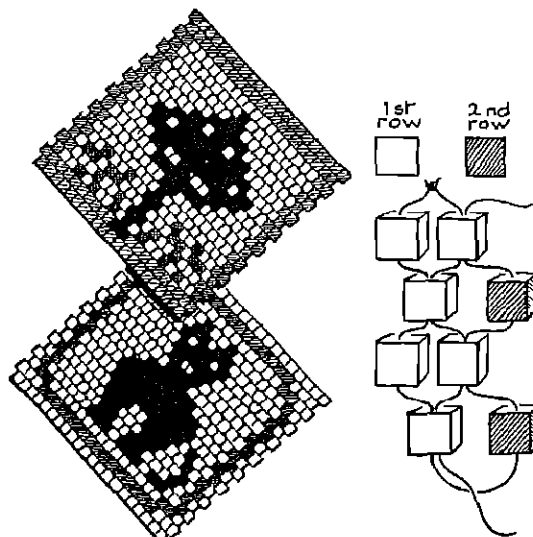
FIG. 13

Mats Arranged in Mosaic Fashion

When a design is chosen, the number of squares should be marked off on a sheet of paper, and the squares representing the design filled in with the respective colours, it is then quite a simple matter to follow out the pattern correctly.

PHYSICAL TRAINING

LESSON SCHEMES AND EXERCISES

THE physical education of the child covers a wide field, and includes an increasing variety of activities, each with its special part to play in the physical development of the child. Healthy development depends, primarily, on good functioning of the vital organs These organs can be maintained in a healthy condition only if a *sufficient* amount of vigorous muscular exercise occurs in the daily routine of the child's life. Further, such exercise can only yield its maximum benefit if taken in the open air, with its tonic and invigorating effect. The Physical Training lesson must be, therefore, a daily period of vigorous activity taken out-of-doors, whenever possible.

The Lesson Scheme

1 Introductory exercises.
(*a*) Running, etc
(*b*) A rhythmic jump.
2. Trunk exercise.
2*a* Break (1) A general activity exercise
3 Arm exercise.
3*a* Break (2). A general activity exercise.
4. Balance.
5 Jumping and Games.

It will be seen that general activity exercises predominate in the lesson, and that these alternate with the exercises which have a special

effect, viz. the Trunk, Arm, and Balance exercises. This alternation of the two types of movements involves constant changes in the position of the class, giving opportunities for vigorous activity all through the lesson, and calling for alertness and quickness of response on the part of the children.

The lesson is a composite one, including both group and individual competitive activities, as well as movements chosen for their specific effect on the body

Organization of the Lesson

To obtain the best results the activities should follow quickly after one another, there being no "dead" pauses when the class is inert, i.e. inactive both physically and mentally. The lesson, then, should be memorized and the organization planned and visualized by the teacher In this way the lesson will be conceived as a whole, instead of as a series of disjointed activities, and the rapid succession of its various parts involving continual alertness will result in mental as well as physical stimulation

Organization is largely concerned with the grouping of the children, formations, and the mobilization of the class

(1) *Grouping of the Class* The class should be

divided into four teams, red, blue, green, and yellow, each child wearing a band (over one shoulder and under the opposite arm) of his team colour.

(2) *Team Leaders.* These must be chosen for their efficiency and power to act as leaders, but the opportunity to lead should not be restricted to only one member of the team. It is a privilege valued highly by the children, and although the chief duties of team leaders may be limited to the most efficient, opportunities for temporary leadership, such as often occur in the lesson, should be distributed widely.

3. *Formations—*

(*a*) *Exercises on the Spot.* (i) *"Free" forma-tion.* The children space themselves over the ground so that each one has ample room to do the exercise. Children tend to crowd together,

```
R  |v_v_v_v_v_v_v_v_v
   |
B  |v_v_v_v_v_v_v_v_v
   |
Y  |v_v_v_v_v_v_v_v_v
   |
G  |v_v_v_v_v_v_v_v_v ·
```

X TEACHER
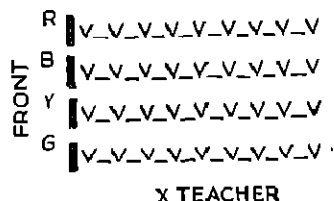
FIG. 1

Open Files

and they should be trained and given practice in spacing themselves generously.

(ii) *The Square Formation.* Each team forms one side of the square. To allow of sufficient space each team joins hands with arms extended sideways.

(iii) *The Circle or Ring.* However many form the ring, the arms must be fully stretched when the hands are joined.

(iv) *Open Files or Team Places* The following method of taking this formation is recommended. On the command, " Leaders to your places, *run!*" the leaders go to their places, preferably marked by chalk lines, with four or more paces between them, and with right (left) side towards the front, and facing the teacher.

At the command, "Call your files in," each leader loudly calls his own colour, and his team place themselves in line with him with both arms extended sideways and finger tips touch-ing. At the command " *Turn,*" all jump to face

front, lowering the arms as they do so. This method calls for active participation of the whole class, throws responsibility on the leaders, who correct the alignment of their teams, and ensures that generous spacing that means space and air around each individual, and which always marks the trained class (Fig. 1)

(*b*) *For Exercises Involving "Class" Move-ment.* (i) *Free Formation.* The children move freely over the playground, following their own individual paths, and avoiding contact with others.

(ii) *The File.* If this is used for running or skipping the "loose" file is generally to be pre-ferred. In this the spaces may be uneven, and the faster runners may overtake those in front of them (on the *outer* side), so that no child's movements are hampered by the one in front of him. To prevent the class from crowding in to the centre, as tends to happen, the course must be marked by "posts" of some description

(iii) *The Flank Line.* The children stand side by side, but with double arms' distance between them.

(iv) *The Circle.* As previously described.

4. *Mobilization of the Class* The constant changing of class formations calls not only for alertness on the part of the class, but also for the giving of ready and concise directions by the teacher. The verbal directions can often be supplemented by gestures, especially in the early stages of the training.

Facing and astride positions are always taken with a jump—and a *high* one. Commands are " With a jump to the left (right, or round-about) —*turn!*" · "With a jump, feet astride—*place!*" or "Feet astride—*jump!*"

Although for convenience in the text reds and blues are always linked together, and likewise greens and yellows, no fixed rule like this should be followed, but as much variation as possible should be introduced.

Equipment

1. *Coloured Bands.* One for each child ($1-1\frac{1}{8}$ yd. long) in four bright colours Worsted braid (Double London) is obtainable at all saddlers'

2. *Jumping Ropes* Two at least, about 18 ft long.

3 *Canes.* Four or more bamboo canes, 3–4 ft. long.

4. *Small Hoops.* Three for each team about 18 in. in diameter.

5. *Four posts or bases* to mark the track. A broomstick cut in half and inserted into a wooden base, 6 in. square, makes a suitable post, and, if holes are drilled through it at 2-in. intervals, it will serve as a jumping stand.

6. *Chalk.* Block chalk is recommended, and there should be four good-sized pieces, kept in a tin, at hand throughout the lesson

7. *A Whistle.*

Clothing

What is needed is that the body shall be hampered as little as possible by clothing, and that there shall be the freest play of light and air upon it that can be achieved.

GENERAL ACTIVITY EXERCISES

These are vigorous movements based on running and jumping. They have an immediately stimulating effect on the organs of respiration and circulation, and because of this they should occupy the greater part of the lesson.

Running. (1) Each one should run at top speed, no one being hampered by a slower one in front of him, and to avoid this the "loose" file is advisable. (2) Running should be given for the most part in short periods with momentary pauses between them, as occurs in games If the running is given in long periods it deteriorates as the childrens' energy and interest flag. The necessary pauses should not be "dead," unoccupied ones, and are provided for by the taking up of some formation or body position (3) After vigour has been established lightness should be aimed at, but this must not be obtained at the cost of vigour.

Skipping step, or *skipping,* as it is now generally called, whereas in running the *forward* movement must be emphasized, in skipping the *upward* spring should be stressed. Because of this, skipping can take the place of running where lack of space does not allow of the children going at full speed in their class running, or where the surface or unsuitable footgear are likely to produce bad falls. In this connection it is noticeable, as an invariable fact, that children rapidly gain in control with practice of these vigorous activities, and that tumbles are the mark of an untrained class unused to vigorous and free movements.

A. *Introductory Exercises*

There should be immediate activity for every child. Where possible, directions may be given before the class leaves the classroom, so that the activity may begin as soon as the children reach the playground. The introductory activity, although vigorous, should be in short spurts, so that the children are not rendered unduly breathless at the beginning of the lesson.

There must be the minimum amount of time spent in organizing the activity A simple activity—a short period of running or skipping followed by a run into a specified formation—is probably the best kind of Introductory Exercise for a Junior class

1. EXAMPLES OF INTRODUCTORY ACTIVITIES

Standard I

Group leading or Steer the Ship. Each team follows its own leader, keeping behind in a file.

Follow my Leader, with various steps and figures.

Free skipping; at whistle, skip in twos.

Free skipping in twos; at whistle, partners swing round together.

Skipping, in free formation, following the teacher, at whistle she turns and chases them. Those caught join teacher and help in chasing.

Running in loose file, at whistle run to sides of playground.

Group leading; at whistle form one circle

Running from one end of the playground to the other

Standard II

Zig-zag running (see Standard IV, Lesson 2) at whistle run to nearest wall.

Free running, or skipping, at whistle make one circle.

Free running, or skipping; at whistle, one team makes a circle and the rest a larger one outside it.

Group leading, at whistle (a) teams make circles "anywhere," i.e. at the place they happen to be when the whistle goes, (b) teams make circles in corners, (c) teams reverse direction, the last one leading.

Free skipping; at whistle teams find leaders and form circles or files behind them.

Free skipping; at whistle reds and blues stand still and greens and yellows skip in and out amongst them. At next whistle reverse this and so on.

Standard III

Free running; or skipping, in ones, twos, or threes as the number is called.

Running in loose file; on whistle, (a) turn about and run in opposite direction, (b) teams form circles in corners, (c) jump high in the air and continue running.

Zig-zag running, at whistle stop, at next whistle continue running.

Running in file following the teacher; at whistle form a square, each team forming a side.

Running in loose file; at whistle teams find their leaders and make circles.

Group leading; at whistle form *one* big circle, *two* circles, or *four* circles as previously specified. In forming the two circles, two teams join together as previously arranged, and for the four circles each team forms a circle.

Standard IV

Running and jumping ditches, marked at opposite sides of playground.

Running in loose file; at whistle (a) form circles of four, one of each colour in each circle, (b) each one turns all the way round, and the running continues in the same direction as before.

Skipping in circle, hands joined; at whistle leaders run to centre and join hands, and teams form files behind them.

In a flank line at side of playground, run across to opposite side; at whistle (a) stop, (b) stop, turning round to face starting point, (c) turn and run in opposite direction.

2 RHYTHMIC JUMPS

These are of the skip and astride jump type, done on the spot. They occur in the lesson as follows—

(a) As introductory exercises following the taking up of team places.

(b) As activity balance exercises where they are followed by the holding of a balance position, e g. astride jump to eight counts finishing in knees bend position.

Teaching Points—

Work first for individual height, not for uniformity of class rhythm.

Practise the landing in crouch position.

Arms should always be *free.*

The jumping should stop either (a) at the whistle or (b) at the end of a certain number of jumps, previously stated.

It is a mistake to have a complicated series of movements. If this is attempted, the child's attention will be distracted, and he will fail to put his whole effort into the attainment of height in the jump and a full stretch of the body.

B. *Breaks*

These are General Activity exercises, and are placed in the lesson after the trunk and the arm exercises. They should be carefully thought out and should make a definite demand on the physical capacity and mental alertness of the class. The following points should be observed in the choice of breaks—

1. They should be suited to the age and capacity of the class.

2. The breaks taken in any one lesson should differ from one another, where possible, in—

(a) The formations used.

(b) The type of competitive interest involved —group as against individual competition.

3. If competitive, the conditions must be fair for all.

The break does not entail a relaxing of effort, but a change in the type of activity from the preceding exercise, and should be looked upon as being of equal importance in the training as other parts of the lesson.

Variety in Breaks It is chiefly in the breaks

that the teacher finds opportunities of introducing the unexpected element in a lesson. The working out of one's own breaks adds much to the interest of the lesson from the teacher's standpoint.

Examples of Breaks classified according to the formation used and arranged in order of difficulty—

1. *Free Formation*

"Get behind me"—(*a*) free, (*b*) in twos, (*c*) in threes or fours.

As far as possible before the whistle blows.

"Twenty" skips or runs anywhere

Around "me" and post in a given direction.

"As far away as you can"—in ten leaps, long steps, jumps with feet together, etc.

Free running or skipping, at whistle teams get behind leader.

Skip in twos, at whistle (*a*) change partners, (*b*) make rings of four and skip round.

Try to keep behind own leader.

2. *In Open Files*

Inner files round outer files, and stop in own place.

Ditto and stop facing partner in outer file holding hands and in knees bend position.

Reverse files.

Each one in inner file around his partner in the outer file, once or twice around.

"All run" file race, the first and last ones in the files acting as posts, or touching end walls.

Inner files serpentining down outer files.

3. *In Circles*

Skip in one circle; at whistle (*a*) teams make circles in corners, (*b*) teams make files in corners, (*c*) make circles of fours, one of each colour in each circle, (*d*) when teacher calls a number, say "three," the class makes circles with that number in each circle.

Free skipping at "one," make one circle at "two," reds and blues make one circle and greens and yellows another at "three," at "four" each team makes a circle.

Teams form circles in corners, around a post or chalk mark. The teacher calls two colours and these teams change places, seeing which can make its circle the more quickly.

In a Double Circle

The leaders make a small circle in the centre of the large circle. All skip to left, and at whistle the leaders stand still, keeping hands joined, and the teams form files behind them

Reds and blues form a circle and act as posts, greens and yellows stand behind them each with a post (partner). The outer ones run once around the circle and finish facing partner (who has turned round) with hands joined and in knees bend position.

Skip in one circle: when a colour is called, say "red," the reds make an inner circle with the rest joining hands in the outer circle· when another colour is called, that team takes the place of the reds, and the reds rejoin the outer circle. There should be no pause in the skipping.

4. *In One File*

Try to pass the one in front on outer side, mark the track with posts.

Catching the tail.

On whistle (*a*) turn about and run in opposite direction, (*b*) spring high into the air and continue running, (*c*) stop, (*d*) turn all the way round and continue running in same direction.

5. *In Four Files*

Group leading, at whistle (*a*) teams form circles, (*b*) run to team places, (*c*) form files behind leaders.

Group leading, each leader waving her band above her head: when she lowers the band her team stops: the band is then given to the second one, who becomes the new leader, the first leader going to the end of the file

6. *In Lines*

One flank line, cross to the opposite side with (*a*) giant leaps, (*b*) giant steps, (*c*) galloping sideways, singly and in twos.

Two flank lines on opposite sides of playground, cross over, (*a*) without touching, (*b*) meet partner in centre, touch hands and run back to own side, (*c*) one side makes arches by raising the joined hands, the others pass underneath the arms.

"Runs," individual and in teams.

"Thread the Needle" race.

C. Jumping

The clearing of an obstacle, involved in most of the jumps used in the final General Activity of the lesson, is to most children a source of great interest and pleasure. It calls for judgment of space and accurate timing of the movements used, and if the jump is worthy of the child's effort it encourages perseverance and the overcoming of difficulties.

The jumps suggested in the lessons are described in the notes

EXERCISES WITH SPECIAL EFFECT

Trunk Exercises

The trunk exercises included in the lessons are, with one exception, of one type, involving a forward and downward bending of the body

FIG. 2

Trunk Bending Downward, Grasping the Ankles

Note The strongly stretched knees and the well tucked-in head of the front child

so that every joint of the spine is involved. Of all the special exercises this "big bending" one is the most important. Keeping the spine supple will do much to prevent its fixation into an unsymmetrical and drooping position. The movement also helps to strengthen the muscles which play an important part in the maintenance of good posture.

The following are the trunk exercises suggested in the lessons—

1. Feet astride, trunk bending downward, touching the ground between the feet.

2. Crouch position, keeping the hands on the floor, stretch the knees and try to touch the knees with the head.

3. Feet astride, trunk bending downward, holding the toes

4. Feet astride, trunk bending downward, beating the ground between the feet, down and up quickly.

5. Feet astride, trunk bending downward, grasping both ankles. (Fig 2.)

6. Feet astride, trunk bending downward, beat the ground between the feet three times and stand erect.

7. Feet astride, trunk bending downward, putting head on ground. (Fig. 3.)

8. Feet astride, trunk bending sideways, elbow to knee. (Fig. 4.)

9. Feet astride, trunk bending downward, grasp one ankle, head on knee. (Fig. 5.)

10. Feet astride, trunk bending downward, tapping ground with fingers, knuckles, palms.

11. Feet astride, trunk bending downward, beating the ground for three counts and holding erect position for three.

General Teaching Points

The feet must be kept firmly on the ground, and the knees pressed back throughout the exercise.

The bending of the body must be as complete as possible, the head to take part in the bending also.

The movement should be repeated 5-6 times

Time should be given in the downward bend position for an effort to be made to take the movement to its fullest extent, and the children should be encouraged to make this effort. It is the continued effort to carry the bending farther that is required, not the holding of a fixed position. The teacher must watch this effort, giving full opportunity for it, but must

give the command "up" before the power of making the effort is exhausted.

FIG. 3
Trunk Bending Downward, Head on Ground

Arm Exercises

The following are the arm exercises suggested in the lessons—

Alternate arm punching upward.

Arm stretching upward, in one movement.

Crouch position, change to standing on tip-toe with arms stretched upwards.

Alternate arm punching forward with trunk twisting.

Alternate arm stretching upward in one movement.

Informal tug of war, in twos.

Arm swinging sideways and upward.

Double arm punching upward.

Arm stretching upward in one movement and swinging sideways and downward.

One arm upward, arm changing with forward swing.

One arm circling, with hand support on knee.

Alternate arm punching to opposite side (Fig. 6.)

General Teaching Points

The movements of the arms should be accurate, and the exercise must, therefore, be shown as accurately as possible

Vigour is a characteristic of the exercises suggested, and in most of them *speed of movement* should be aimed at.

Body Posture. In many children, owing to

rigidity of the shoulder joints, the body tends to lose its upright position when the arms are raised above the head. There then occur a slackening of the knees, a bending backward at the waist, and a drooping of the head. The children must be trained and encouraged to get a complete stretching upward of the whole body as well as the arms, and to raise the chin so that the head is kept in the normal position.

Balance Exercises

These have a twofold value—

(*a*) In the conscious control which is involved in holding the body in a position in which equilibrium is difficult to maintain.

(*b*) In the training of the muscles which are involved in holding the position, which is usually an erect one in balance exercises The position,
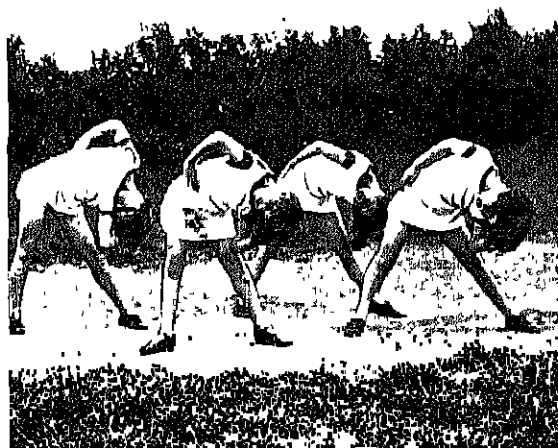
FIG. 4
Trunk Bending Sideways, Elbow on Knee

if held correctly, helps to establish the "feel" of correct posture.

The balance positions most frequently in use are—

Standing on tip-toe

Holding one foot behind.
Hugging the knee to the chest.
Knees full bend position.

to the children, if the position forms the conclusion to a simple jumping or running activity, examples of which will be found in the sugges-

FIG. 5

Trunk Bending Downward, Grasping one Ankle

Note: The second from the left has allowed her left foot to move and her left knee to bend slightly.

FIG. 6

Arm Punching Sideways (to opposite side)
with Trunk Twisting

Knee raise position.

These positions can be taken as simple exercises from the standing position, but a stronger effect is produced, and they become more interesting

tions for lessons. The number of combinations of these simple movements is extensive, and fresh examples will probably suggest themselves to each individual teacher.

PHYSICAL TRAINING

TYPICAL LESSONS
STANDARD I (7–8 YEARS)

Lesson 1

	Exercise	Description	Formation
1	Introductory Exercises	(a) Free skipping, at whistle skip in twos, at next whistle singly again, and so on	Free
		(b) "Into one big ring—run!"	Circle
		(c) Running on the spot, like "wooden men"; stop on whistle	Circle
2	Trunk	(Astride) Trunk bending downward, touching the ground between the feet	Circle
2a.	Break (1)	As far away as possible before the whistle goes, stop on whistle	Free
3	Arm	Alternate arm punching upward	Free
3a.	Break (2)	"Around me and post" (in given direction) (Fig 7)	Free
4.	Balance	Skip jumps, on whistle, hold foot behind	Free
5	Jumping	Running in loose file, jumping ditches (Fig 8)	File

NOTES

Introductory Exercises (a) Encourage good spacing

(c) *Running on the spot* Give this in short periods say eight to ten springs, then a momentary pause Repeat four or five times.

2 *Trunk Exercise.* Commands: "Touch the ground between the feet"—"Down! Up!" Repeat five to six times

3. *Arm Exercise* Commands "Arms ready for punching—place!" "Alternate arm punching upward— begin! stop!" Take it to eight counts, then a momentary pause, and repeat this, say, four times

3a *Break* (2) The children are in "free" formation facing the teacher for the last exercise. She calls "Around me and post—go!" She holds out her left arm to the side to indicate that it is on this side of her the children pass first. The children run as hard as they can along the broken line following the direction of the arrow. The second and succeeding times the direction of the running should be reversed or the children may run around the post first

5. *Jumping.* Let each team start at a ditch, well spaced to allow freedom in the jumping After, say, once round, or earlier, reverse the direction of the running Encourage *high* jumping over the ditches.
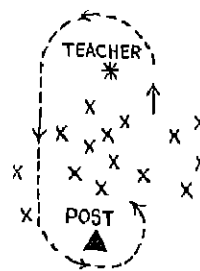
FIG. 7
Break 2 : Running from Free Formation
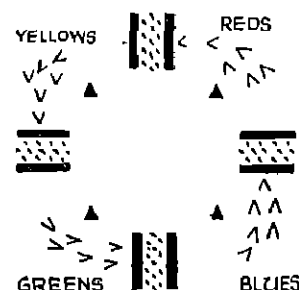
FIG. 8
Running in Loose File

STANDARD I (7–8 YEARS)

Lesson 2

	Exercises	Description	Formation
1	Introductory Exercises	(a) Children skip, in free formation, following the teacher At the whistle, she turns and chases them, those caught join the teacher and help in the chasing	Free
		(b) Skip jumps All face the teacher, at the whistle jump to face the opposite way and continue the jumping	Free
2.	Trunk	(Crouch position) Keeping the hands on the ground, stretch the knees and try to touch the knees with the head	Circle
2a.	Break (1)	"Prancing Horses" (in twos) (Fig 9)	Free
3.	Arm	Arm stretching upward in one movement	Free
3a.	Break (2)	Skip in one big ring, at whistle teams make circles in corners Then at next whistle back to one circle and repeat, going to different corners the next time	Circles
4.	Balance	Running on the spot with knees high, at whistle "hug" the knee to the chest	Free
5	Jumping	Bunny jump forward (Fig. 10)	Lines

NOTES

1 *Introductory Exercises* (a) Those caught might join hands in a long line, dropping the hands when the whistle blows and they chase the rest

(b) *Skip Jumps.* It would be well to blow the whistle so that a rhythmic sequence of jumps, say, 4, 6, or 8 is taken in each direction.

8—(E 3666)

2. *Trunk Exercise* Commands—"Crouch position—place!" "Stretch the knees—up! down!" Crouch position is knees-bend position (Fig. 13), with finger-tips touching the ground between the knees

2a. *Break* (1) "Prancing Horses" The body must be kept erect and the knees raised high Can be done in slow-running time with a spring from foot to foot, or in skipping step time

3. *Arm Exercise* Command· "Arm stretching upward in one movement—up! down!" The arms travel up the sides of the body to the shoulders and then straight up into the "arms upward stretch" position The movement is a quick and continuous one from start to finish. The downward movement is made in the same way.

4 *Balance.* Class faces the teacher in "free" formation Each knee is "hugged" to the chest in turn, the teacher indicating by her hand, or by doing the exercise with the class, which knee is to be raised.

5. *Jumping.* Reds and blues form up in one line with greens and yellows behind them. Each line in turn does Bunny Jump to the opposite line.

Start in crouch position, and the jump is done by first moving the hands forward, then with a spring bringing the feet close up to them These two movements follow one another without a pause.

FIG. 9
Knee-raise Position

Note The position is that for "Prancing Horses," taken freely "anywhere," in twos
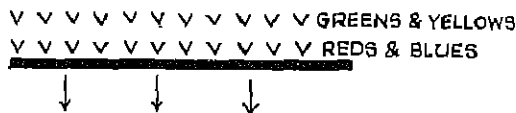
FIG. 10

STANDARD I (7–8 YEARS)   *Lesson* 3

Exercise	Description	Formation
1 Introductory Exercises	(a) Run from one end of the playground to the other Repeat several times	Free
	(b) Skip jumps, lifting the knees as high as possible	Circle
2 Trunk	(Astride) Trunk bending downward, holding the toes	Circle
2a Break (1)	Free skipping, at whistle teams make ring around their leaders, who hold up their hands	Free and circles
3 Arm	Crouch position changed to standing on tip-toe with arms stretched upwards	Free
3a Break (2)	(a) "Out of my sight—go!" (where possibilities of hiding exist), or	Free
	(b) Reds and blues at one end, greens and yellows at opposite end of playground, change places without touching	Free
4 Balance	Free skipping, at whistle, take crouch or knees-bend position	Free
5 Jumping	Thread through hoop, jump over cane and through the second hoop (Fig 11)	Files
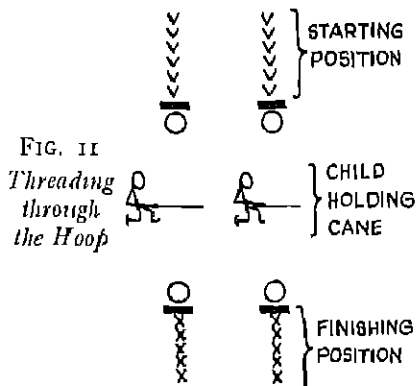
FIG. 11
Threading through the Hoop

STARTING POSITION

CHILD HOLDING CANE

FINISHING POSITION

NOTES

1. *Introductory Exercises* As this is not competitive, the children line up informally, but *well spaced*

2 *Trunk Exercise.* Command "Holding the toes—down! up!" The children grasp the toes, and, pulling with the arms with bent elbows, try to get the head as near to the ground as possible. Repeat five to six times

2a *Break* (1) At each repetition, a different member of the team can act as leader, the one chosen holding up her hand when the whistle blows, to indicate her position to the others.

3 *Arm Exercise.* Commands· "Crouch position—place!" "On the toes with arms stretched upward—up! down!" Repeat five or six times

3a *Break.* (a) At the whistle the children run back to the teacher.
(b) The two teams at each end line up informally, but well spaced

5. *Jumping.* The diagram shows two teams in position At the word "Go," the leader in each file "threads through hoop" (i e picks it up, puts it over his head, and passes it down his body and jumps out of it), jumps over the cane, threads through second hoop and stands behind it facing the cane. Each one in turn follows on as soon as the one in front of him is through the first hoop.

STANDARD II (8-9 YEARS)

Lesson 1

Exercise	Description	Formation
1. Introductory Exercises	(a) Free skipping, at whistle reds and blues stand still, and greens and yellows continue skipping in and out amongst them At next whistle reverse this	Free
	(b) Leaders call their teams into files .	Files
	(c) Running on the spot, eight with knees straight, eight with knees high	Files
2. Trunk	(Feet astride) Trunk bending downward, beating the ground between the feet—down and up quickly	Circle
2a Break (1)	Group leading, at whistle leaders call their teams into files	Files
3. Arm	(Feet astride) Alternate arm punching forward with trunk twisting	Lines
3a Break ,	Running on the spot, at whistle the two inner teams quickly change places with the outer teams, and continue running on the spot At next whistle files go back to their own places. At next whistle, stop	Files
4. Balance .	Crouch position, change to standing on tip-toe . . .	Free
5. Jumping .	Jumping over cane and ditch (Fig. 12)	

NOTES

1. *Introductory Exercise,* (a) Encourage very generous spacing

2 *Trunk Exercise.* Command "Beat the ground between the feet, down and up quickly—go!" "Again—go!" and so on If possible beat the ground with the palms of the hands and get the head close in to the knees.

2a. *Break* (1). "Group leading"—each leader, with his team in a file behind him, goes where he will over the playground, so long as he does not "cut through" another team. In this Break the leader starts off, carrying his band above his head, immediately on the command, "Follow your leaders—go!" the teams fall into files behind their leaders as quickly as possible

3. *Arm Exercise.* Let the class face to the side for this, as there will thus be more room for the punching.

Command. "Arms ready for punching—place! Punching—begin! stop!" The hands are clenched, and elbows are bent so that the hands are close to the shoulders in the "ready" position. Punch as hard as possible straight forward, keeping the feet (astride) steady, but getting a strong twisting of the trunk with each movement of the arms.

4. *Balance* Command, "Crouch position—place!" "On the toes—up! down!" The movements should be quick and strong, and the *whole body* stretched when on the toes.

5. *Jumping (over cane and ditch)* Two teams line up facing the ditches and the other two facing the canes. All follow on one after another, each one after jumping, running on, around post, and joining on to the end of the line doing the next jump *Encourage good spacing,* so that each has a good clear jump
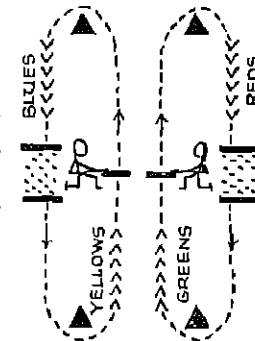
FIG. 12

Jumping over Cane and Ditch

STANDARD II (8-9 YEARS)

Lesson 2

Exercise	Description	Formation
1 Introductory Exercises	(a) Group leading, at whistle teams make circles with hands joined Repeat several times	Files and Circles
	(b) Skip jumps, trying to get as high as possible	From files
2. Trunk	(Feet astride) Trunk bending downward, grasping one ankle (Fig 5)	Four files
2a Break (1) .	Try to keep behind leader without touching him . .	Free
3. Arm	Alternate arm stretching upward in one movement . .	Free
3a Break (2)	Skip in one circle; at whistle teams make circles in corners and continue skipping, and at next whistle back to one circle	Circles
4 Balance .	Free skipping in twos ; at whistle partners face, joining both hands, and take knees-bend position (Fig 13)	Free
5 Jumping	Forward jump over widening brook (Fig. 14) .	File

NOTES

1 *Introductory Exercises.* (a) At whistle, teams should aim at making the circles as quickly as possible

(b) Give this in short periods such as would allow six or eight jumps for most children, and then start again

2. *Trunk Exercise* Commands, "Grasp the right (left) ankle—down! up!" "Now the other one—down! up!" and so on.

2a *Break* (1). The teacher, who leads, should give the class a really good run, as well as putting in plenty of twisting and turning and change of direction.

5. *Jumping* Two long diverging lines are drawn across the playground, and the class forms up at one side. Following one behind the other, they run up and down in parallel lines, jumping the ditch when they come to it At its widest part the ditch should not be less than the best jumper can cover

FIG. 13

Knees Full Bending, in Twos

Note The *pressing downward and outward of the knees, especially good in Nos 4 and 6 (from the left). The erect spine, with the weight well back over the heels. The head positions, 1, 4, and 6, have maintained a good position, the others have allowed the head to droop forward. The position is taken in free formation*

STARTING POSITION OF CLASS
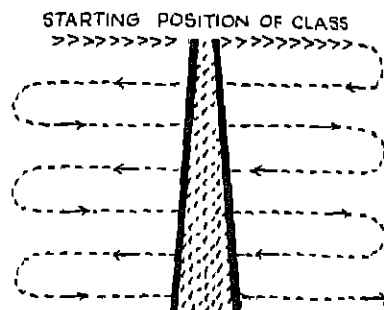
FIG. 14

Jump over Widening Brook

STANDARD III (9–10 YEARS)   *Lesson* I

Exercise	Description	Formation
1. Introductory	(a) Running in file, following leader; at whistle, run to sides of ground, each team to the side previously specified. Repeat, changing the position of the teams	File and square
	(b) Skip jumps, lifting knees as high as possible . - . , .	Square
2 Trunk .	(Feet astride.) Beat the ground three times and stand up Repeat five to six times	Circle
2a Break (1) .	Leaders make a small circle in centre, the rest a ring outside. With hands joined all skip to left (leaders to right), at whistle, leaders stand still, keeping their hands joined, and teams form files behind them	Circles
3 Arm ,	Arm swinging sideways and upward , , . . .	Files
3a. Break (2) .	Inner files, following their leaders, run around the adjacent outer files, and finish each one facing her partner in the outer file, with hands joined. Partners then change places, so that outer files now become inner files, and the race is repeated	Files
4 Balance	Each team forms a circle with hands joined, all gallop sideways to left, or right, at whistle, stop and take knees-bend position (Fig. 19, p 1280)	Circles
5. Jumping	Jump the swinging rope . . . , .	Circles

NOTES

1. *Introductory Exercises.* (a) Give *short* periods of running and before starting specify to which side each team is to run. On the whistle each team forms up in a line—side by side, but well spaced—all facing the centre on the side of the playground specified for it.

(b) *Command*, "Skip jumps, lifting the knees as high as you can—go! stop !" Give the jumping in short periods, allowing for an average of six jumps in each period. The children jump in their own time.

2. *Trunk Exercise.* *Command*, "Beating the ground three times—down! 1, 2, 3!" After "three" the children return to the erect position without waiting for a command. The beating of the ground is to induce the biggest bending of the body possible, and on "three" a particularly strong effort should be made to get the head right down between the knees.

2a. *Break* (1). At the whistle, when the leaders stop, and the teams race to form files behind them, no "cutting through" another team should be allowed.

3 *Arm Exercise* The arms must be carried up in wide circles, the body kept erect (no leaning backward from the waist), and chin kept well on chest

3a. *Break* (2). This is a competitive movement, and fair conditions must be established. The outer files form the track,

and the first and last ones in each of these files must be on a level with the corresponding one in the other file The children should be trained to take up the correct positions, the reason for them being explained

5. *Jumping* Arrange the class in two circles, two teams in each. There are generally to be found in any class certain children who, with a little practice, can swing the rope efficiently. It is, moreover, a coveted task and, with encouragement, children will practise the swinging so as to be proficient enough to take on the work in the lesson.

STANDARD III (9–10 YEARS) — *Lesson 2*

Exercise	Description	Formation
1 Introductory	(a) Running in a loose file, keeping outside posts, at whistle, teams find their leaders and make circles . . .	File and circles
	(b) Four skip jumps facing front and four facing the opposite direction Repeat until the whistle blows	Files
2. Trunk	(Feet astride) Trunk bending downward, grasping one ankle (Fig 5) .	Files
2a. Break (1) .	Reverse files	Files
3 Arm	Double arm punching upward	Files
3a. Break (2)	Catching the tail	One file
4 Balance .	Swing in twos, at whistle take knees-bend or knee-raise position, facing partner with hands joined (Fig 13)	Free
5 Jumping .	Jump the cane and thread through hoops (Competitive in teams) (Fig 15)	

NOTES

1. *Introductory Exercises.* (a) Repeat with short periods of running. Stop on last whistle (two blasts), and leaders call their teams into open files.

2. *Trunk Exercise.* Command, "Grasping left ankle—down! up!" Feet firm on ground, knees pressed back, pull with the arms (bending the elbows), and try and touch knee with head

Fig 15 Jump the Cane and Thread through Hoops

2a *Break* (1) Command, "Reverse files—go!" Each leader turning to left, or right, and followed by the rest of her file, runs down the side of her team and stands in the place previously occupied by the last of her team, but facing in the opposite direction

3a *Break* (2). The class forms up in one file at the side of the playground, and posts are placed at the corners of the track. At the command "Go!" all run as hard as they can, following their leader—the head of the snake—who tries to catch up with the last one—the tail The size of the track depends on the size of the class, but the "head" must have a reasonable chance of catching the "tail" without prolonging the running unduly.

4. *Balance Exercise.* Partners join hands and swing round together as quickly as they wish. Encourage swinging in both directions

5. *Jumping* The diagram shows two teams in position At the command, "Go!" all run forward, jump the cane, go round the post and thread through hoops, in turn The team back in its starting place first is the winner To thread through the hoop, pick it up, pass it over the head, slip it down the body, and step out of it

STANDARD III (9–10 YEARS) — *Lesson 3*

Exercise	Description	Formation
1. Introductory Exercises	(a) Group leading at whistle (i) form one circle, (ii) two circles, (iii) any other variation	Free
	(b) Four skip jumps and two astride jumps . . .	Circle
2 Trunk	(Feet astride) Trunk bending downward, putting head on ground (Fig 3)	Circle
2a Break (1) .	Partners on opposite sides of ground, each one takes off his band and puts it on the ground behind him At command "Go," each one runs across to the opposite side, picks up his partner's band, runs back to centre, exchanges band with partner and puts it (his own) on, and then, joining hands, they take knees-bend position (Fig 13)	Two flank lines
3 Arm .	Arm stretching upward in one movement, and swinging sideways and downwards to sides	Four files
3a Break (2)	"Anything you like" for, say, two minutes .	Free
4 Balance .	Astride jumping, landing in crouch or knees-bend position Later facing in another direction in the landing	Four files
5. Jumping .	Giant leaps (Fig. 16) . . .	Four lines

V V V V V V V V V V GREENS
V V V V V V V V V V YELLOWS
V V V V V V V V V V BLUES

∧ ∧ ∧ ∧ ∧ ∧ ∧ ∧ ∧ ∧ REDS

FIG 16

Formation for Giant Leaps

NOTES

1. *Introductory Exercises.* (a) Specify the formation to be taken up on whistle before the group leading begins, thus, "On whistle, reds and blues form a circle at this end, and greens and yellows a circle at the opposite end." Other variations suggested are (i) Circles with, say, five, six, seven, etc., in each; (ii) circles with one of each colour in each

(b) This can be taken in children's own time for maximum height, or working in a uniform rhythm.

2 *Trunk Exercise.* Command, "Head on the ground—down! up!" Naturally, the kind of surface will determine the use of this exercise.

3a. *Break* (2). Keep strictly to the time stated

5. *Jumping.* At the word "Go!" blues see in how few leaps they can reach the opposite line. Their partners in the red team count their leaps Blues then count for yellows and reds run behind greens, and so on.

STANDARD IV (10–11 YEARS)   *Lesson 1*

Exercise	Description	Formation
1. Introductory	(a) Free and Caught (S G.) . . . , , . (b) Astride jumps, four without rebound, and two with rebound. Repeat four to five times	Free Four files
2. Trunk . .	(Feet astride.) Trunk bending sideways, elbow to knee (Fig 4) . .	Four files
2a Break (1)	Thread the Needle race . . . , . . .	Four lines
3. Arm	One arm in upward, the other in downward stretch position, arm changing with forward swing	Four files
3a. Break (2) . .	Inner files "serpentining" down outer files, around last man and up to place (Fig 17)	Four files
4 Balance . .	Chain grasp position Running on the spot with knees high; on whistle, hold the knee-raise position (Fig 20)	Two or four lines
5. Jumping .	Running oblique high jump (Fig 18)	

INNER FILE

OUTER FILE

FIG 17

"Serpentining"

V
V STARTING
V POSITION
V OF TEAM
V

POSITION
OF TEAM FOR
2nd JUMP

FIG. 18
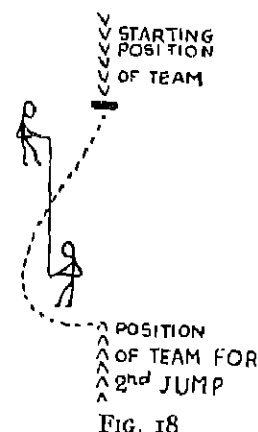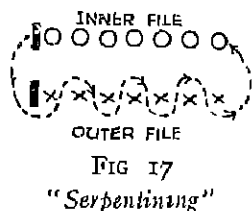
NOTES

2. *Trunk Exercise.* Commands, "Feet astride and left (right) hand on head—place!" "Trunk bending sideways—down! up!"

The bending is taken as far as possible in the sideways direction

2a. *Break* (1). Each team forms a line with hands joined on one side of the playground. The last two in the team raise their joined hands, forming an arch The leader, drawing the others after him, passes under the arch, and all finish in a straight line as at the beginning The hands are kept joined throughout, and the one forming the arch on the inner side passes under it in his turn. Repeat with the arch at the opposite end *Variation.* The team can finish in a circle instead of in a straight line

3a. *Break* (2). The inner file follows the path indicated by the dotted line, all following the leader who passes first in front of the leader in the outer file, using the outer file as "posts." With an *odd* number of posts the inner file will finish on the inner side, as in diagram. With an even number of posts the inner file will finish on the outer side of outer file

N.B. There must be the same number of posts in each of the outer files.

4 *Balance* In "chain grasp" position the hands are held about level with the shoulders, with the elbows loosely bent Command, "Running on the spot with knees high—begin !" On the whistle, the knee is held up on the side indicated by the teacher's raised hand as well as by verbal directions. It is not necessary to insist on all starting with the same foot

5 *Jumping.* Each team takes up a starting position as shown in the diagram. On the first jump, each will "take off" with the left foot (the one farthest from the rope), and for the second jump, from the opposite end, with the right foot.

Holding the rope. This should be held horizontally, and turns should be taken at this, changing after every two jumps

STANDARD IV (10–11 YEARS)

Lesson 2

Exercise	Description	Formation
1 Introductory	(a) Zig-zag running (Fig 19), at whistle, teams make files in corners (previously specified, or leaders can decide on their respective corners) Then group leading and at next whistle, leaders call their teams into four files	Files
	(b) Spring steps, six in each direction	Four files
2. Trunk	(Feet astride.) Trunk bending downward, tapping the ground with finger-tips, knuckles, palms	Circle
2a Break (1)	Running in loose file, on whistle, (1) turn about, (2) spring high in the air and run on, (3) stop Repeat several times	File
3. Arm	One arm circling, with hand support on knee.	Four files
3a Break (2)	Runs in teams (Fig. 20)	Two flank lines
4. Balance	In twos, with hands joined, heel raising and knee full bending (Fig. 13)	Two flank lines
5 Jumping	Three standing long jumps (Fig. 21)	Four files

NOTES

1. *Introductory* (a) Zig-zag running. The class, in one file, run in straight lines up and down or across the playground

(b) After six spring steps facing front, the class turns to the left and, without pause, repeats the six spring steps facing that way, and so on until facing front again Repeat the whole, turning to right

2. *Trunk Exercise.* Command, "Tapping the ground with fingers, knuckles, palms, four times—*begin!*" This is a rhythmic series of movements, the tapping with the finger tips and the knuckles occupying *one* count each, and the beat
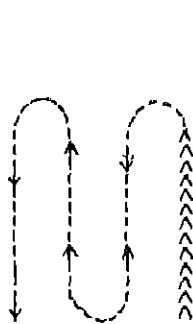
FIG. 19
Zig-zag Running
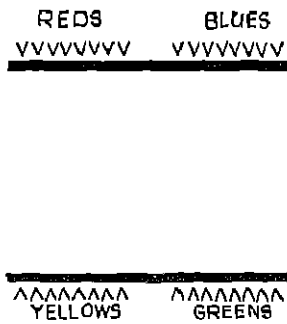
FIG. 20
Scoring Runs
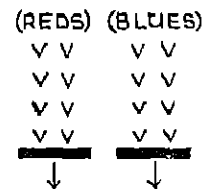
FIG. 21
Long Standing Jumps

with the palms *two*. The class should call in chorus, "Fingers, knuckles, palms," and so on, coming straight up to standing position after the fourth time.

2a. *Break* (1). Specify before starting what is to be done on the first, the second, and the third blow of the whistle. Any suitable variations can be used, and the number need not be limited to three

3. *Arm Exercise.* Place the left foot about a pace forward, with knee a little bent and left hand resting on the knee. Starting with the right arm by the side of the body, move it forward, upward, backward and downward in as large a circle as possible. Begin the movement slowly and gradually increase the speed until the arm is swinging round quickly Keep the fist loosely closed, so that the arm muscles are not tightened up

3a *Break* (2) Runs in teams. Reds and blues form the "wickets," and, standing toeing the line, hold out one hand in front of them Yellows and greens facing reds and blues, run across the playground, touch the hands of their partners in the red and the blue teams, and run back to place The team in position—toeing the starting line as at start of race—first is the winner.

4. *Balance* Following the break, the class forms up in two long flank lines down the middle of the playground, partners facing and joining hands. In the heel raising and knee bending the movements should be quick and decisive, with a definite pause in the heels-raise and knees-bend positions when these occur.

5 *Jumping* The teams should work independently in different parts of the playground Two should jump at a time to avoid overlong waiting for turns. The jumps are made with feet together, and each one tries to get as far as possible in three consecutive long jumps The distance, where the heels touch in the last jump, can be marked in chalk by another member of the team.

ORGANIZED GAMES FOR GIRLS

THE Junior School period, 7–11 years, covers a range of development which makes it difficult to consider it as a unit. When the child leaves the Infant School she is an individualist in her reactions to the world around her, including her companions · when she reaches the Senior School she is just approaching, but has not quite reached, that stage when co-operation with others and the sinking of her own interests in that of the team seem natural and desirable, and find such satisfactory expression, for perhaps the majority of children, in the major organized team game. During the Junior School period there should occur a steady development of physical powers—speed, endurance, skill—and of those qualities—love of fair play, co-operation with others, control of self with keenness of interest—which are necessary to the successful playing of major team games.

Training in Games

This includes—

1. Training in skill or technique, i.e. the control and development of physical movements such as running and the handling of balls, etc.

2 Training in the spirit of the game, which only those possessing and appreciating it can impart, and which can only be imparted by example and inference and the play of minds upon one another. The love of fair play, the joy of playing, the goodwill permeating the competition, these are the factors which make games truly recreative and so essential in education.

The possibilities of training, both in its physical and psychological aspects, during the Junior School period, have not yet been properly explored. Too often these children have been set to play the major games with no training in the technique of the games and when they are too immature to understand their complex rules and the co-operative basis of their tactics · or they have been left largely to play by themselves without real training or guidance.

Classification of Games

Classification of games according to their suitability for certain age groups is not, except within somewhat wide limits, very satisfactory. The results of previous training and the variation in the capacity of children of the same age are likely to upset any classification made. A more satisfactory basis of classification is according to type and in each group the games will be arranged, as far as possible, in order of difficulty.

Types of Games

1. *Running and chasing games.*
2. *Games practices.*
3. *Mechanical team games.*
4. *Minor organized team games.*
5. *Major organized team games.*

Some description of these terms is necessary.

1. *Running and Chasing Games.* Typical examples of this group are Tag, Circle Race, Free and Caught, Crusts and Crumbs (S.G.).

"S.G." throughout this chapter refers to *Suggestions in Regard to Games*, issued by the Board of Education

2 *Games Practices.* These are organized practices in the technique of the more highly skilled games, and are chiefly concerned with ball throwing and catching in its many diversified forms

3 *Mechanical Team Games.* These are based on inter-team competition, and well-known examples are "Arch and Tunnel Ball" and "In and out the files relay" (S G.). In this form of game the movements are prescribed and each child in turn performs them. They can vary from games involving only the simplest movements to games involving a considerable degree of skill.

4. *Minor Organized Team Games* These form a link between the mechanical team games, with their prescribed movements, and the major organized games, of which hockey, net-ball, and

stool-ball are examples. In these latter games the player is thrown on her own initiative, and must adapt her play to conditions which are momentarily changing: the rules are complex, and skill and endurance and co-operation with others are called for. The minor organized team games are in some cases simplified forms of the major games, and in all cases they aim, by a set of rules and technique and methods of play, at training the child in co-operative play within the measure of her capacity.

The Organized Games Period

A. 7–9 years. Length of lesson, 20–25 minutes.
1. Running or chasing game
2. Games practices.
3. Running or chasing game.
4. Mechanical team games and races.

B. 9–11 years. Length of lesson, 25–30 minutes.
1. Running or chasing game.
2. Games practices.
3. Mechanical team games.
4. Chief game—minor organized team game.

Agility practice, running and jumping in some form, can be introduced with advantage into the lessons.

Equipment

Balls. Four footballs, size 1 or 2
Small balls, of tennis ball size, one for each child
Coloured bands, hoops, posts, canes, see "The Physical Training Lesson," page 1258.

Running and Chasing Games

1 All forms of "Tag" (S G. 39–43) Other variations are—
(a) Reds are "Hes." Let all one team be "Hes," and see how many these can tag in one minute. A player can be tagged any number of times.
(b) Snowball Tag. Start with four "Hes," wearing their bands, while the rest carry theirs. Any one tagged puts on her band and becomes

a "He," but first, she and the one who has tagged her must run and touch one of the end walls before chasing others.
2. Partner Grab All, except the "odd men," find partners and link arms. The "odd men," four to six of them, according to the number playing, each attempt to link on to one of the pairs, who try to prevent this by running and dodging. When an "odd man" succeeds in linking on to a pair the outside one of this couple becomes an "odd man"
3 Fox and Geese. This is the well-known game in which the Mother Goose, with her goslings in a file behind her, each clasping the waist of the one in front, defends her brood, with outstretched arms, from the attacks of the fox, who, starting facing the Mother Goose, attempts by dodging quickly to catch (touch) the last in the line. When this happens, or the line breaks, the fox scores a point and another fox takes her place. The game becomes more active for all if short lines, say of six, are arranged for. Also let play for all start at the same time, and let each fox have 1 or 1½ minutes for her catching
4. The Red and Blue Flags The class stands in two lines, about three paces (10 ft.) apart, at one end of the playground, with the leader in the centre of the ground Both lines face the leader and at the command, "Forward-march!" all march forward keeping in line. The leader holds, out of sight behind her back, a red band in one hand and a blue in the other. At any moment during the marching forward of the lines, she suddenly raises one hand above her head. If the red band is raised all turn, the greens and yellows trying to catch the others before they reach Home (behind line AB). If the blue band goes up all run forward, the reds and blues chasing the greens and yellows, who are safe when behind the line OP. (Fig 1)

Games Practices

These should aim at giving facility in throwing and catching balls of all kinds—footballs and small balls—under all sorts of conditions, such as long and short distances, high and horizontal throws, aiming at targets of varying height. But players should, above all, gain skill in

handling the ball while on *the move*, and while dodging and avoiding other players

1. *Individual and Free Practice* Free individual play with balls is valuable, but the teacher can do much to stimulate the efforts of the children by joining in with them and by suggestion. Girls should be encouraged to—

(*a*) Use the over-arm throw.

(*b*) Practise throwing long distances and for height.

(*c*) Throw harder, swifter balls.

2. *Centre pass out, all Jumping* (small football). Not more than twelve players stand in a
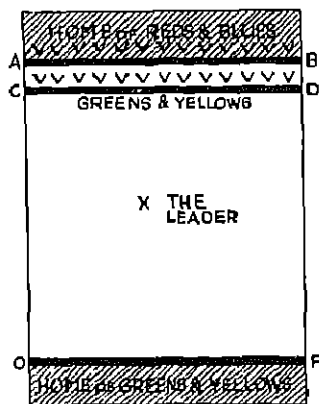
FIG. I
Red and Blue Flags

circle with a thrower in the centre. The ball is thrown between those in the circle and the thrower, while all jump up and down "on the spot."

3 *Running Circle Catch* (S.G.). This provides for vigorous activity for all, and with a skilful centre thrower a great deal of variation in the throws can be achieved. The centre thrower should throw well ahead of the catcher, so that she will have to make a strong forward movement, later a leap, to catch the ball.

4. *Aiming practice* (with small balls).

(*a*) *For the Smaller Children*

Reds and blues, each with a ball, throw at the skittle. The balls are fielded by the greens and yellows, who then have their turn of throwing. A suitable skittle can be made by three

sticks, such as hoop sticks about 20 m. long, fastened near the top with an elastic band.

(*b*) *Aiming at a Post with Over-arm Throw.*

This can be practised in twos, one throwing and the other fielding in turn. Lines drawn at different distances from the post will enable the girls to estimate their progress.

5. *Passing in twos, informal* (with small balls) Players work in twos, each pair with a ball. They pass the ball from one to the other while moving rapidly over the playing space. Running with the ball should be discouraged, the player whose turn it is to receive the ball should

Reds and Blues.

Greens and Yellows.
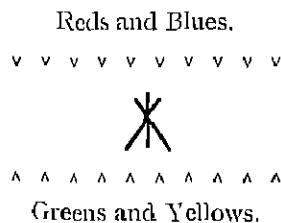
FIG. 2
Aiming Practice

be the one to move, which means that immediately *after* throwing the player should dart quickly to another part of the ground.

6. *Passing in threes* (small football). The players line up in threes as in Fig. 3 The first line runs forward, One passing to Two, Two to Three, and back again, and so on, until six passes have been made The three then turn and run back to the starting line, repeating the six passes. To encourage *forward* passing each line should aim at covering as much ground as possible in the six passes. Players should be encouraged to *leap* forward to catch the ball, and to return it as quickly as possible The distances between the three players will vary according to their skill and strength.

7. *Passing in twos, serpentining down file* (small football) One and Two pass the ball between them, each of them "serpentining" in and out her own file down to the end and back again. On reaching her own place, One must bounce the ball and then pass it to Four, who at once with Three starts "serpentining" down the files, round the last ones, up and around the first ones and

into own place Four then bounces the ball and passes it to Five (Fig 5).

8. *In Files, running to end of file* (small football). The leader throws the ball to One who returns it and runs to the back of the file, Two moving forward into One's place. The leader throws to each one in turn in this way. When One regains her position at the head of the file, she takes the leader's place, the latter going to the back of the file. Encourage straight, hard

bag immediately it has been dropped in the circle.

2. *Relay Race with Hoops.* Each team stands in a file, with two hoops in front of it, one at the starting line, and the other 25 ft. (or more) away from it, with a post at the same distance farther on At the word "Go" One passes the first hoop over her head and down to her feet, and steps out of it leaving it on the ground and runs on to the second hoop, which she "threads" through
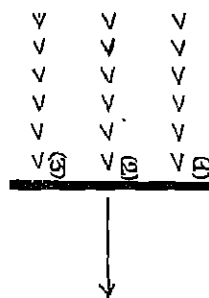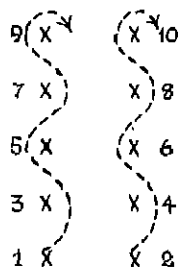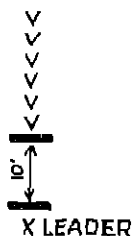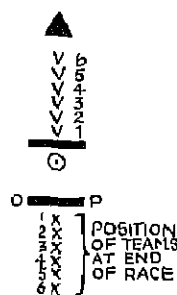
FIG. 3	FIG. 4	FIG. 5	FIG. 6	FIG. 7
Passing in Threes	*Passing in Twos*	*Passing in Files*	*Relay Race with Bean-bag*	*Relay Race with Hoops*
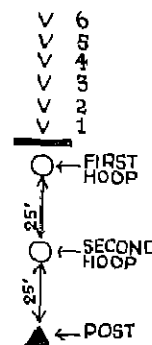
over-arm passes from the shoulder, and also a steady rhythm in the passes (Fig. 5).

Mechanical Team Games

a. Without Balls

1. *Relay Race placing Bean-bag in Circle.* Each team stands in file as in Fig. 6 Immediately in front of each team a small hoop is placed, or a circle is drawn, in which is placed a bean-bag. At the word "Go," One picks up the bean-bag, runs with it round the post at the back of the file, up the opposite side of file, and replaces it in the circle, and then stands facing the team behind line OP. Immediately the bag is dropped by One, Two picks it up and repeats what One has done, and after dropping the bag in the circle stands behind One. The last player, instead of dropping the bag in the circle, hands it to One, who holds it above her head calling her colour. Each one in turn moves up to the starting line, in order to pick up the

in the same way, and then runs round the post and back to the starting point. *Immediately* the first one is through the first hoop Two follows on, threading through the two hoops in the same way as One, each one in turn following on in this way without pause. The last one, after threading through the second hoop, picks it up, follows the others round the post, and on reaching the leader hands the hoop to her and she holds it up at arm's length above her head.

3. *"All Run" File Race.* The leader, followed by the rest, runs forward, around the first post, down the track and around the second post, and up to the starting line. As they come into place at the end of the race all turn to face in the opposite direction with Six at the head of the file. This turning to face the opposite way will check the tendency to an uncontrolled finish with the children crowding on one another Repeat with Six leading, and finish facing first post in original places (Fig 8).

4. *Jump the Cane and Thread through Hoops*

See The Physical Training Lesson, Standard III, Lesson 2, page 1269 (Fig. 15)

5. *An Exchange Relay.* Each team stands in twos as in Fig. 9. One and Two, each carrying a bean-bag, run forward, meet beyond the first post, exchange bean-bags, run on in the same direction around the second post, and up alongside their own file. They hand the bean-bags to Three and Four (who have moved up to the starting line) who set off immediately they receive the bags. One and Two then take up their places at the back of the files. At the conclusion of the race Seven and Eight hand their

while the latter does not check her running until she has handed over the baton.

(2) Suitable batons can be made from broom sticks cut into 10 or 12 in. lengths.

b. With Balls.

1. *Tunnel Ball, with Wide Spaces* (small football or tennis ball). Allow three good paces between the players. While a mark for each player is a help to orderly formation, this is not essential, and players will, with practice, learn to estimate the distance. It is, however, essential to have a line which must be toed by the
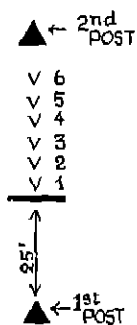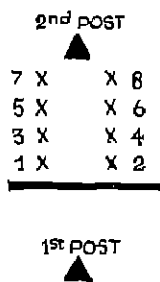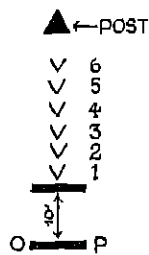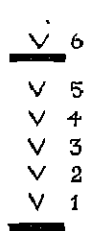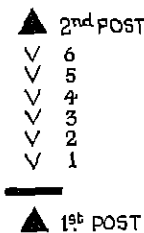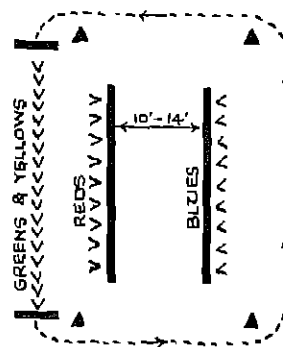
FIG. 8	FIG. 9	FIG. 10	FIG. 11	FIG. 12	FIG. 13
"All Run" File Race	An Exchange Relay	Round the Files Relay	Tunnel Ball	Tunnel Ball and "All Run" File Race	Courier Passing Game versus "All Run" File Race

bean-bags to One and Two, who hold them up above their heads.

Variations. (1) The bean-bags can be exchanged at the second as well as at the first post.

(2) The bean-bag may be *thrown* to the next one as soon as the runner-up has passed the second post.

6. *Round the Files Relay* One, carrying a baton, runs forward, touches the ground with the baton beyond the line *OP*, turns, runs down alongside her file, around the post, up on opposite side of file, and hands the baton to Two, who has moved up to starting line One then goes to the back of the file (Fig. 10).

N.B. (1) This being a relay race with the running all in the same direction, the players should be trained to exchange the baton on the run, the waiting one going back a little and starting to run before the runner-up reaches her,

first one in the file and one behind which the last one must stand, so that in each team the ball will have the same distance to travel. This wide spacing both prevents the game from being a scramble so that no one knows who is responsible if the ball goes astray, and involves more accurate rolling of the ball by the first and subsequent players (Fig. 11)

2. *Tunnel Ball and " All Run" File Race* In this the players stand close one behind the other. A post is placed in front of and behind the file.

One "tunnels" the ball to Six, who picks it up, runs up the side of the file, the rest, headed by One, joining on behind immediately Six has got level with the first post. The whole line, now headed by Six, runs around the first post, down and around the second post and up into place, number Six holding up the ball on reaching the starting line (Fig. 12).

Variations. (1) Instead of the game stopping at this point, Six, as soon as the team is in place, can tunnel the ball to Five, who picks it up and runs to the front and, as Six did before, leads the file around the posts and up into place, "tunnelling" the ball to Four, these movements being repeated until One reaches her original place. (2) Arch instead of tunnel ball can be played.

3. *Courier, or Zigzag Passing* versus *All Run File Race* (small football). Reds and blues standing behind lines 10–14 ft. apart, according to strength of throw do Courier (S.G. 63) or zigzag passing, counting a point for each pass
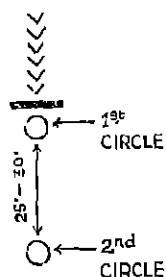
FIG 14
Bounce Ball Relay
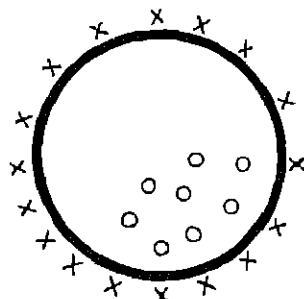
FIG. 15
Circle Dodge Ball

correctly thrown (from behind the line) and caught. Greens and yellows keeping outside the posts run once around the track and up into place. When all the greens and yellows are over the finishing line, the whistle is blown and the number of passes made by the reds and blues is noted. The running and throwing teams then change places, each trying to score the greatest number of passes (Fig. 13).

N.B. The runners need not keep in file, the fast ones being allowed to overtake on the outer side. There is a tendency for the slower ones to "dawdle" over the finishing line, they should be encouraged to spring over it and so save a second or two.

4. *Bounce Ball Relay* (with small football or tennis ball). Number One bounces the ball in first circle, catches it, runs on and bounces the ball in the second circle, returns to first circle and bounces the ball in this and *Two* catches it. Two repeats the same movement as One, who

goes to the back of the file. Each one must remember to bounce the ball in the first circle before running forward (Fig 14)

Variation. (1) One, after bouncing the ball in the second circle can ROLL, THROW, or PITCH the ball back to Two. One then stands behind the second circle facing her team and each in turn forms up behind her. To make a clear and definite finish, One, as race is nearing its finish, can run back to starting point to receive the throw from the last player.

Minor Organized Team Games

1 CIRCLE DODGE BALL (football size 2).

Markings. A large circle, varying in size according to number of players and their strength and skill. Suggested measurements and teams are—

Attackers—16.
Dodgers—8 (half the number of attackers)
Circle—20–25 ft. in diameter.

The attackers stand outside the circle at equal distances from each other. The dodgers stand inside the circle. (See Fig. 15.)

Object of the Game. The attackers attempt to "hit out" with the ball as many dodgers as possible in the time allowed—$1\frac{1}{2}$–3 minutes Each dodger so hit retires from the game, and one point is scored by the attacking team.

Rules. (1) The hit must be a direct one. The dodger is not counted out if the ball touches the ground first

(2) Only one hit can be scored off one throw, even if the ball from one throw hits two dodgers, the first one hit is the one who retires from the game.

(3) The attacker's feet must be behind the line when throwing at the dodgers.

(4) Any dodger going outside the circle to dodge the ball is considered out

The Throw Players should be encouraged to throw the ball in *as speedily as possible* If this is not done the dodgers will have ample time to get into a safer position The best sort of throw, when attacking, is a one-handed one, with the arm swinging round the side of the body, aimed at the hip-height of the dodgers.

Fielding. All the attackers should be on the alert watching the ball, and every effort must

be made to stop the ball and pick it up quickly and neatly.

Retrieving the Ball. (1) *Outside the Circle.* Should the ball roll past the attackers, the nearest one should run for it and *throw* it back to the nearest attacker.

(2) *Inside the Circle* If the ball remains in the circle the nearest attacker should run in for it and *throw* it to one of her own side. In no case should an attacker, after retrieving the ball, run with it, even a step or two, to her own place.

Tactics. Direct throws at dodgers who are at the opposite side of the circle are not usually successful, as the length of the throw gives ample time for dodging. The attackers should aim at passing the ball quickly and accurately between themselves to keep the dodgers on the run and uncertain of the next move of the attackers. Then at a favourable moment, a quick direct hit at a dodger who has miscalculated the position of the ball will generally be successful.

2. Free End Ball.

Pitch. (See Fig. 16)
Length—50-60 ft.
Width—25-30 ft.
Goal area—3 ft. in width.
Centre line—dividing pitch into two equal courts.

Apparatus—a small football.

Arrangement of Players—

(a) *Catchers.* Three of each team act as catchers and stand in their own goal area.

(b) *Defenders.* Three of each team act as defenders, and stand in their opponents' goal area "marking" the catchers.

(c) *The rest* stand half on each side of the centre line, two players of opposite sides standing together and "marking" one another.

Scoring of Goals. A goal is scored when a catcher, *with both feet within the goal area*, catches or holds the ball. The ball may be received from a bounce, or a roll along the ground as well as from a direct throw (this last to be the type of play to be encouraged).

Start of Game. The ball is bounced in the centre of the ground between two players of opposite sides, who stand one on either side of

the centre line facing their own goal area; all other players must be 3 yd. away. *After a goal is scored* there is no pause in the play, the catcher immediately throwing the ball out to one of her own side.

Playing the Ball (i) There must be no running or walking with the ball.

(ii) The ball may not be held for more than three seconds, nor may it be thrown up, or bounced, and caught again by the same player.

Blue Goal Area, in which are Blue Catchers and Red Defenders
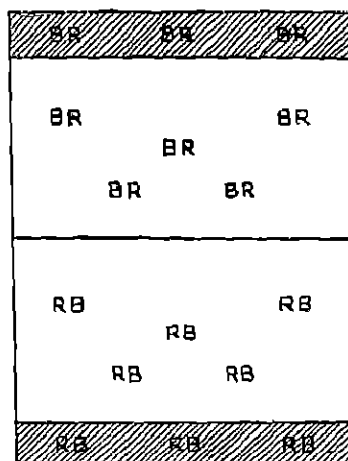
Red Goal Area, in which are Red Catchers and Blue Defenders

Fig. 16
Free End Ball

(iii) A player may not take (snatch or push) the ball from another player.

Penalty. A free pass to the opposite side from the spot where the breach of rule took place, all other players to be at least 3 yd away.

Ball Out of Court. The ball is thrown in from the point where it left the court by a player of the opposite side to the one who last touched it.

3. Nine Court Net-ball

Pitch. This is a rectangle or square divided into nine equal courts. It may range in size from 48-72 ft. each way (Fig. 17).

Apparatus. Small football.

Arrangement of Teams. Two players, one of either side, stand in each square.

Object of the Game. To score goals by netting the ball in the opponents' goal.

Start of the Game. At the commencement of the game, and after each goal, the game is started by a pass taken by one of the players in square 9, each side alternately takes this pass.

Rotation of Players. After each goal the players move on clockwise to the next square, those in square 9 going to square 1
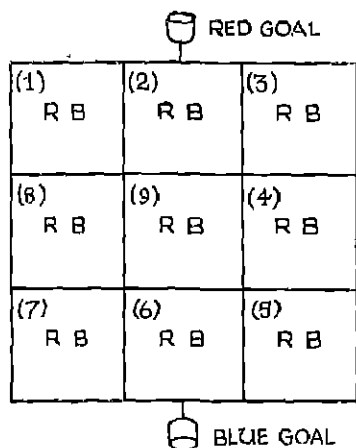
FIG. 17
Nine Court Net-ball

Playing the Ball and Ball out of Court. As in Free End Ball.

Throwing for Goal. Any player may throw for goal.

Position of Players. Players must keep within their own squares. Penalty for player stepping over the line—a free pass to her opponent.

N.B. (1) *Running with the Ball.* This rule being a most difficult one for the children to observe, it is suggested that in the early stages of the game it be abandoned. As the players must keep within the limits of their own courts, the running can never be excessive, and, as the throwing becomes stronger and more accurate, experience will prove that immediate throwing, rather than running with the ball, is the best tactics.

(2) *Goal Posts.* If correct net-ball posts and rings are not available goals may be improvised as follows—

(a) A child can stand in centre of end line holding a waste paper basket above her head when the attacking side is ready to shoot.

(b) The basket can be attached to a map or window pole 8–10 ft. from the end. This is somewhat heavy and tiring to hold, and for this reason is not satisfactory

(c) A small hoop can be held by a child vertically above the head and the ball thrown through this. This will make the scoring of goals a simpler matter, but this is not altogether a disadvantage, as it ensures rapid rotation of the players, and the re-starting of the game in the
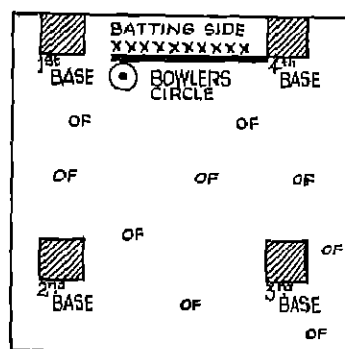
FIG. 16
Danish Rounders

centre, in itself an advantage with inexperienced players.

4. DANISH ROUNDERS (a Summer game).

Apparatus. A tennis or small rubber ball.

Markings. (See Fig 18)—

(a) The batting line behind which stands the batting side.

(b) Bowler's circle (or square), 1 yd. in diameter, about 6 ft. from the line and opposite the first batsman

(c) Bases—4 ft. square The first base in line with the batting line and 8–10 ft. from the bowler's circle· the other three bases at the other three corners of a square whose sides are about 30 ft. long.

Number of Players. Any number may play, but more than twelve a side is not advisable (X = batsmen, OF = fielder)

Method of Play The bowler standing in her circle and facing the first batsman throws the

ball upwards and towards her. The bowling arm is kept straight and no attempt is made to give difficult balls If preferred the bowler's circle can be close to the batting line and the ball, held with the arm outstretched in front, can be thrown vertically upward about 3 ft. in the air. In practice, it sometimes happens that in this method the proximity of the bowler interferes with the batsman's movements.

The batsman, with the open hand or closed fist, attempts to hit the ball as hard as she can, and whether she hits or misses it she must run for first base.

Fielding the Ball. The fielders have one duty only—*to return the ball to the bowler*, who as soon as the ball is in her hands—one foot at least being in her circle—calls "*Now!*"

A batsman is out—

(*a*) If the ball she has hit is caught by a fielder.

(*b*) If she is not at a base, one foot at least

being grounded within it, when the bowler calls "Now!"

Running from Base to Base

(*a*) Any number of players may be at the same base.

(*b*) A player may choose her own time for running on to the next base, except when running for first base.

Scoring. A player reaching the fourth base without being out scores *one* point for her side.

A Rounder is scored and counts *four* points if the course be completed off one hit and the fourth base be reached before the bowler calls "Now!"

Note on Practices. The change over from batting to fielding should be made after each of the batting side has had a turn at hitting and a reasonable opportunity of reaching the fourth base and scoring a point. This will probably mean that the first three players have two turns. These should come last in the next innings

Knee-raise Position —Chain Grasp Position in Line

Note: This position can be used for a simple knee-raising movement, a hopping movement "on the spot," and a progressive movement forward. Notice the good positions of 1 and 5 (from the left).

Knees Full Bending —in a Circle with Hands Joined

Note: Position of arms — the elbows should be bent, the hands at about shoulder-level.
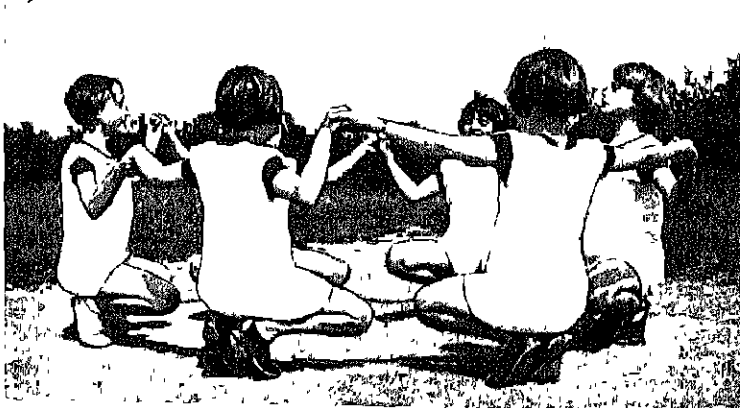
FIG. 19
Exercising in Ideal Conditions

ORGANIZED GAMES FOR BOYS

THE aim of the teacher of organized games in the Junior School should be to develop skill and proficiency in these games by means of graduated exercises, and, at the same time, to maintain interest and create an atmosphere of lively co-operation and enjoyment. The games lesson will prove dull and lifeless if the skilful players monopolize the stage to the discouragement of the less proficient. The work should be planned so that *all* may participate in the games, the slower pupil being encouraged to take as active a share as the star performer.

We cannot take Junior children out into the playing-field straightway to play cricket and football. If our pupils are to take an intelligent interest in these games they must develop a technique by means of carefully graduated preparatory exercises and activities. Just as we have a progressive course in our physical exercise lessons so we may prepare our children for our national games by encouraging them to participate in preliminary exercises which, while complete games in themselves, will tend to cultivate a higher standard of efficiency when the major games are played.

If our organized games are well planned on scientific lines and conducted by enthusiastic teachers the indifference and inefficiency of the weaker and slower player will vanish, and *all* pupils will derive physical and mental enjoyment.

It has been urged that Junior organized games should be, as the term implies, methodically planned, and graded in self-contained activities according to the age and skill of the pupils, it is now our purpose to set out, briefly, a few suggestive exercises to be regarded as progressive steps leading to cricket and football. The football activities may be applied, with simple adaptations, to hockey and its simplified form, shinty. Many of these games may be played in the school playground in districts where playing-fields are not available. Sixty minutes being the maximum time generally available for organized games, the teacher will recognize the absolute necessity of keeping all

his pupils fully occupied if the full physical and educational benefits are to be derived from the lesson

I. Cricket

There are frequently many idlers when a school cricket match is in progress, batsmen and bowler generally monopolizing the situation.

To overcome this objection to cricket as an organized game the exercises should be planned so that all pupils take an active part throughout the lesson. In schools where teachers have given definite coaching in throwing and fielding this branch of our national game has ceased to be regarded as drudgery. At the commencement of each organized games period a few minutes' practice in catching should be given, the pupils being divided into groups. In the playground tennis or sorbo balls may be used, but if the games take place in the playing-field composition and cricket balls should be introduced as soon as possible.

A Fielding Game

A method frequently adopted in coaching older boys in this all-important branch of the game is to line them up, in sections of seven or eight, at set intervals along the edge of the field. To each section is allotted a batsman whose duty it is to try to score boundaries by hitting a ball through the line of defence from a distance of twenty or thirty yards. To save time each batsman is provided with two or three balls and the fielders are instructed to lob the balls back to the batsman.

A simpler but most effective plan for coaching Junior boys in fielding is to dispense with the batsmen and to have two sets of fielders.

The ground is marked out as shown in Fig 1. The playground walls may form part of the boundaries or the playing area may be defined by using cricket stumps or flags. The bouncing area may be indicated by chalk lines or by two

tug-of-war ropes. Two courts will be required for a large class.

The object of the fielders is to throw the ball so that it pitches in the bouncing area and crosses the back line of the opponents' court. The opposing fielders, arranged in two or more lines, try to prevent a boundary being scored, and in their turn try to pierce the defence of the other team A successful throw scores one point

White tapes pegged in position, as shown in Fig. 2, mark the area within which the ball should pitch. If the wickets are parallel four long tapes are easily fixed to serve the purpose.

Each team consists of wicket-keeper, bowler, and long stop at each end. A seventh boy may act as scorer

The aim of the bowler is to pitch the ball in the space between the tapes and to hit the
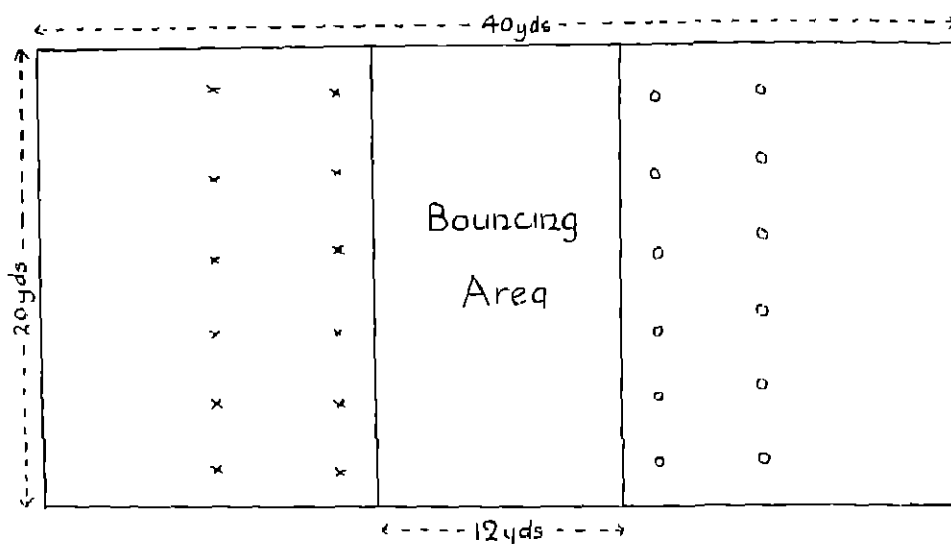
FIG. 1

A Fielding Game

and, in order to make the game as brisk as possible, not more than one step with ball in hand should be allowed Scouts may be posted at each end to return the ball after a point has been scored. A definite number of points may be decided on beforehand as the winning score, or a time limit may be arranged

Bowling Practice

To give as much practice as possible in this branch of the game and to maintain the interest of all the pupils several pitches should be set out side by side at intervals of 5–10 yd., according to the space available. For Juniors the length of the pitch should not exceed 18 yd. Playground stumps set in a wooden stand are recommended as being most easily set up.

wicket. Three points are scored when these two conditions are fulfilled and one point when the ball is pitched correctly without hitting the stumps. When the ball has passed from wicket to wicket twelve times, i.e. when each bowler has completed an over, the wicket-keepers become bowlers and the long stops move up to become wicket keepers, the displaced bowlers taking their places.

Batting Practice

Most boys desire to excel as batsmen. A beginning may be made by giving an elementary idea of the chief strokes all batsmen should have at their command Net practice is out of the question in the majority of schools, but a few preliminary exercises, tending to produce a

correct batting technique, may be given at the commencement of each games period. With stump or stick in lieu of bat the boys may practise forward and back play, strokes to the "off" and strokes to the "on," they may begin to form an idea of the importance of keeping a straight bat.

the lesson. The class is divided into three or four groups under leaders, each group having its own pitch and an adequate supply of the necessary utensils. The boys in each group are numbered, each boy keeping the same number throughout the season. This gives the batting order, the last boy in each team being the first
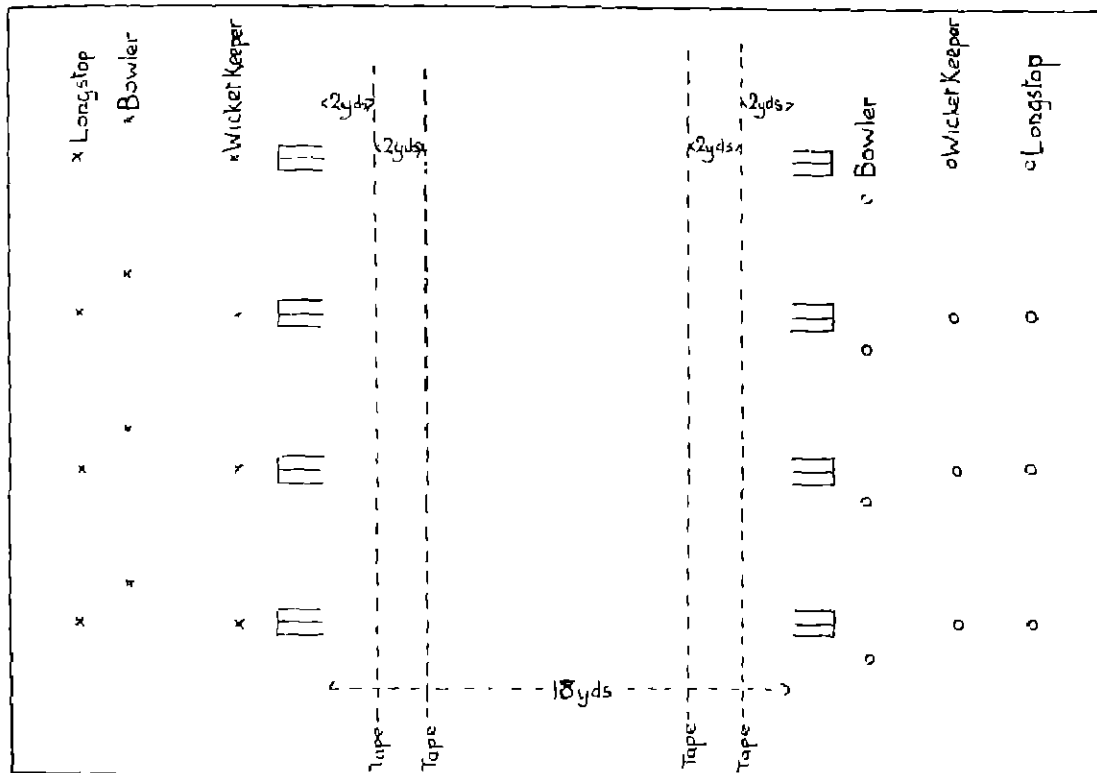
FIG. 2

Field Set for Bowling Practice

The average boy is anxious to adopt the correct style, but this drill must not be allowed to become irksome or uninteresting "the play's the thing," especially for Juniors

When cricket is adopted as an organized game the difficulty is to keep all the boys employed and to ensure that the less skilful player gets a fair share of the game Match play fails to achieve this.

The writer has found the following method of providing batting practice works admirably, each pupil being actively employed throughout

wicket-keeper. The fieldsmen occupy the correct fielding positions and each boy in turn bowls an over.

Single wicket is played, but a batsman, when running, may be put out at either end. Each boy bats for, say, five minutes unless he is out twice before the expiration of that time. For each time out four runs are deducted from the batsman's score.

The retiring batsman becomes wicket-keeper —he has the pads on—and at every change of batsman each fielder moves to the next position.

If it is considered necessary the boys may take turns in acting as umpire-scorer.

When the teacher considers the pupils sufficiently proficient an occasional match between the teams may be played on the "knock-out" principle, A v. B, C v, D, the winners of the first match playing the winners of the second for the championship. These matches, of course, would be played under the correct rules, which are always to be found in the scoring book

II. Football

The following competitive games, complete in themselves, are intended to serve as coaching exercises in passing, trapping, heading, dribbling, and shooting, the main activities in football.
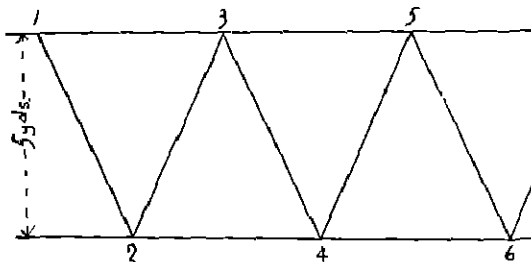
FIG. 3

A Passing Game

Passing Game

The members of each team are arranged at convenient intervals in two lines about 5 yd. apart. Thus, four teams will require eight lines. At a given signal the ball is passed to and fro, from No 1 to No 2 and so on, till it reaches the last boy. It is then returned in the same manner till it reaches No. 1, who holds it above his head,
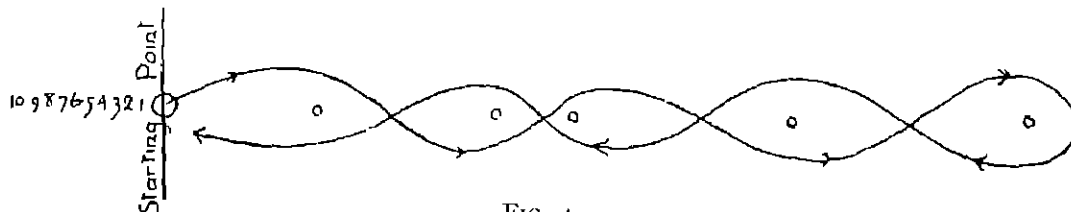
No pass may be made from within the parallel lines, which may be defined by flags at each end of the course. The players will soon learn to pass accurately and "first time" whenever possible.

Passing Relay

When the boys have practised the Passing Game they may attempt a relay passing game.

The members of each team are lined up in pairs. When the signal is given the first pair of each team sets off, the ball being passed from one to the other an agreed number of times over a set distance, the passing being repeated on the return journey The second pairs of each team take up the race, and so on till each pair has competed. The team first finishing the double course is the winner

Circular Trapping and Heading

Practice in trapping and heading may be given in circular games These games are not competitive. The teams are arranged in circles with a boy at each centre. The ball is kicked from the centre to each boy in turn, starting with No. 1, whose duty it is to trap it and return it as quickly as possible to the centre

For heading practice the circle should be considerably smaller.

Dribbling Relay

Effective ball control is not easily taught to young boys. The relay game here described has proved successful in cultivating accurate control in many school teams and is advocated by more than one trainer of prominent league teams.

Stumps or skittles are set up at irregular intervals in as many lines as there are teams.

FIG 4

Dribbling Relay

The No, 1 of each team dribbles the ball between each mark, circling the end mark and returning to the starting point in a similar path. Here the ball is passed to No. 2, who follows the same route. Each member of a team follows in turn and the team which first completes the course the requisite number of times is the winner.

As an exercise preliminary to this competitive relay game the teacher may prefer to set out

between the opposing shooters, who try to score a goal without crossing the 5 yd. line, the remainder acting as joint goalkeepers.

All the players are actively engaged and the shooters should be changed often enough to allow every boy a turn. The defenders may kick, head, or throw the ball to their team shooters, who are not allowed to charge or obstruct one another. If the ball crosses the

FIG. 5

Off to Organized Games

The Stumps are used to mark boundaries

three or four circular courses of obstacles to be rounded. If each team of, say, ten boys is provided with five tennis balls a greater number of pupils may be actively engaged, since they may follow each other round the course at convenient intervals.

Goal Shooting

The teams line up behind opposite goal lines, 20–30 yd apart. The players take turns in pairs as shooters, standing on a line 5 yd. from the opponents' goal. The scout throws the ball

side lines it is thrown into the middle of the shooting court by one of the scouts.

A definite number of goals may be fixed as the winning score, or the side leading at the end of the game may be regarded as the winners.

Practice for Match Play

When the boys have had some practice in passing, dribbling, and shooting, they may be allowed to practise for match play.

The method generally adopted is that in

o Scout

× Scout
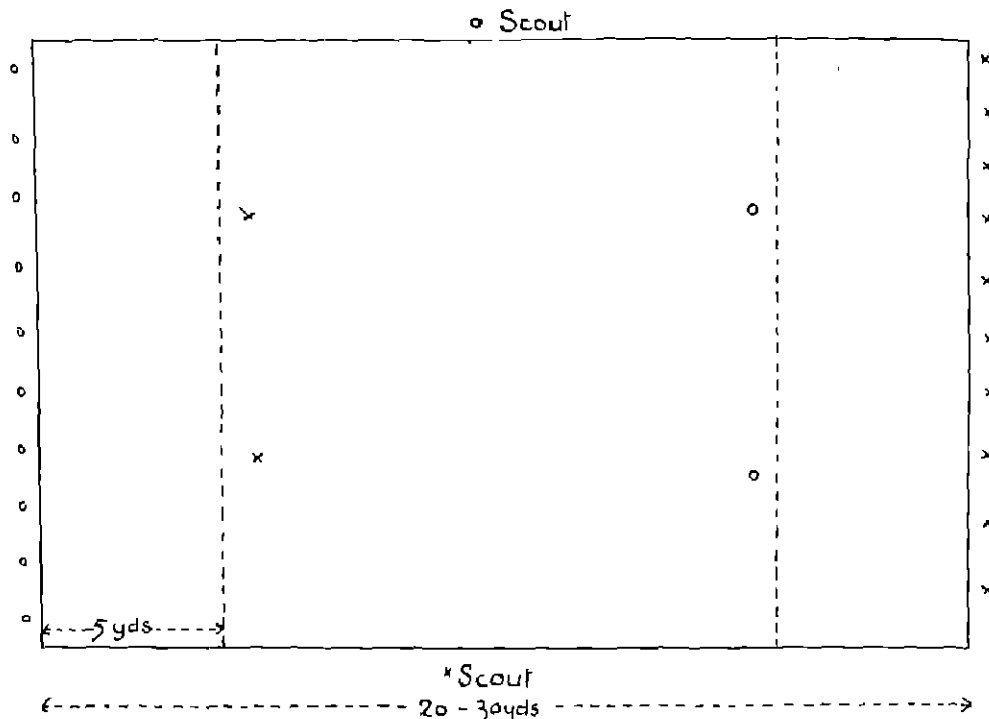
FIG. 6

Goal Shooting

which five forwards strive to pierce the defence offered by the three half-backs and a goal-keeper, two boys being stationed behind the goal to return the ball into play.
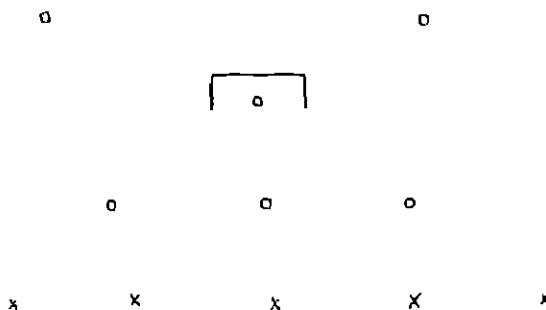
FIG. 7

Practice for Match Play

This game affords excellent training, and if the sides are changed frequently both attack and defence receive their due share of attention.

Four goals will be required if all the members of a class are to participate in this practice

We are indebted to Mr. S F Gill, Ex-Chairman of the English Schools' F.A. for the following hints—

HINTS ON THE GAME

To GOALKEEPERS

Where possible, always use your hands they are much safer than feet Watch the game closely

Never waste time· punch or kick at once—not anywhere or anyhow, but to one of your own side on the wings

Practise punching—swinging and straight, also kicking—the place kick and drop kick particularly

Don't carry or hang on to the ball The first is not allowed, the second is dangerous to your team as well as yourself

Clothe yourself warmly about the body, but don't wear too many garments. Don't forget your gloves, and remember that a cap is very useful for shading the eyes in bright weather.

To BACKS

Don't hesitate, kick hard or use your head and get rid of the ball, to the wings if possible, at once.

Protect your goalkeeper, but give him plenty of room to see all that is going on.

Don't be afraid to tackle "Go in" as often and as quickly as possible, and remember your weight may sometimes, if fairly used, be of service to you If beaten, follow and worry

If your fellow back is tackling, "cover" him Always tackle on the inside and never turn your back.

To stop or play a ball, when awkward for the foot, remember you have a chest, head, and knees

"Take the man" when the goalkeeper is clearing, and let your half do the same for you

Do not keep the ball too low when defending—it gives the attack better opportunities.

To Halves

Never lose your man; if beaten, try again Help your backs by "taking the man"

Keep well up with your forwards and "feed" them carefully

Keep the play well opened out by cross passing. It worries the opposing defence Never lose a chance of a good shot

Don't forget the outside man When passing to him put the ball along the line just in front of him

See that your forwards are not off-side when you pass

Don't pass back unless absolutely forced.

To Forwards

Keep the ball low when attacking, Don't be selfish The "outsides" should "make ground," and centre hard and low when the back comes out to meet them The "insides" should always follow up closely, wait for a pass or centre, and at once work towards the goal-mouth If unable to shoot, push the ball in position for another to shoot.

Practise receiving a ball from high and low; also be able to "take" or shoot a ball on the run.

Keep your place and the ball will come to you, waste no time, get away with it at once, draw the defence to yourself, and then pass Always shoot for the far post

EXPLANATION OF RULES

The Throw In

The new rule requires that a player shall stand behind the line when throwing-in the ball.

The objects of this change are to give the player a wider vision of the immediate field of play and to permit him to face the direction in which he wishes to throw the ball He must, however, still keep a part of both feet on the ground and throw, with both hands, over the head

The Off-side Rule

The new rule requires that there need only be two opponents in front of a player, to prevent him from being off-side, if he receives the ball in his opponents' half

His position is judged at the time the ball was played to him and not at the time he receives it.

He cannot be off-side if he receives the ball in his own half; if the ball was last played by an opponent, from a goal kick or corner kick, or if he is behind the ball when it was last played.

Free Kicks

A goal can be scored direct from a free kick awarded for : Tripping, kicking; striking or jumping at a player, intentional handling; holding or pushing an opponent ; violent or dangerous charging; charging from behind, unless intentionally obstructed, or a corner kick

A goal cannot be scored from a kick off or goal kick or a free kick awarded for playing the ball a second time after a throw-in, free kick or penalty kick, off-side, carrying by goalkeeper; wrongfully charging goalkeeper, playing the ball before touching the ground after being thrown down, ball not kicked forward from a penalty kick, or improper throw-in

The Penalty Kick

This is a free kick, from which a goal can be scored, awarded in the penalty area The kick must be taken from the penalty spot and kicked forward

Players are not required to stand behind the ball, but may take up their position anywhere outside the penalty area, 10 yd from the ball, but within the field of play.

The opponents' goalkeeper must remain still and not advance beyond his goal line.

Should the ball hit the goal post or bar and rebound, the player who played it must not play it again, or a free kick will be awarded.

POINTS FOR PLAYERS

A Place Kick is a kick at the ball while it is on the ground in the centre of the field of play It must be taken in the direction of the opponents' goal line.

The penalty kick must be forward, A free kick may be taken in any direction

A place kick, a free kick, or a penalty kick must not be taken until the referee has given the signal.

A goal kick may be taken in any direction the kicker chooses.

The ball must not be on the move when a free kick is taken Free kicks must be taken without delay.

A goal may be scored direct from a corner kick,

The corner flagstaff must not be removed, even for the convenience of a player taking a corner kick

No opponent may be within 10 yd of the ball when a goal or corner kick is taken This rule applies to all free kicks

The whole of the ball must be over the goal line or touch line before it is out of play

If a ball is not thrown in properly the referee must give a free kick A goal cannot be scored from this kick

Carrying by the goalkeeper is taking more than two steps while holding the ball, or bouncing it on the hand

A goalkeeper must not be charged except when he is holding the ball, or when he is obstructing an opponent, or when he has passed outside the goal area.

A player must not be charged from behind unless he is intentionally obstructing an opponent Charging must not be penalized unless it is violent or dangerous

A player is not allowed to play the ball until it has touched the ground, when dropped by the referee after a temporary suspension

Boot studs must be round, not less than $\frac{1}{2}$ in in diameter, and in no case conical or pointed

SWIMMING

"WHY teach swimming?" is a legitimate question. The answer is threefold; to give exercise and recreation and, most important of all, to enable children to be safe when in, or near, water. Swimming is one of the few forms of exercise in which muscles can gain full strength and yet remain supple and undistorted. Swimming develops the heart and lungs; increases the efficiency of the nervous system and improves the general muscular tone. Children, whilst learning to swim, develop self-confidence in a new element, and later, self-reliance as skill increases. Swimming also promotes habits of cleanliness which make for a healthier as well as a stronger child.

Not only should swimming be taught at school for its excellent physical effects, but also for its social advantages in later life. It is one of the forms of exercise that has a real value not only in school, but in adult life. It is a sport which is cheap, requiring no expensive equipment nor elaborate arrangements, and one which can be enjoyed alone, or in company, with either sex and with people of any age.

If you are teaching only a *few* children, then the younger they start the better, provided that the water level is such that they can stand up in the bath, otherwise they must be taught *individually*. If you are teaching a *class* of children the water depth will determine the starting age, but between nine and eleven years is usually found suitable.

General Principles

Land drill will be found to be a useful basis on which to build *class* teaching of swimming provided that it is not laboured. The stroke to be taught to non-swimmers will depend on the teacher's own preference, and some will teach front crawl and others breast stroke first. The less experienced teacher will, perhaps, be more familiar with the breast stroke than with the crawl and so will teach it to beginners with more confidence. It is a stroke, too, in which the head is clear of the water, and the children see where they are going. Other strokes can then be taught, depending on the scheme to which the teacher is working; for instance, backstroke leg kick must be taught to classes preparing for the Elementary Certificate of the Royal Life Saving Society. As soon as a stroke is mastered, diving practices should begin.

LAND DRILL

If land drill is taken before the visits to the baths begin, it is possible for the movements to be performed automatically and this will increase confidence. If the swimming lessons are to be given in the open air, make every effort to teach land drill beforehand, as it is usually too cold to teach fundamental positions on the bath side or in the water. Plan your land drill to avoid too much prone or supine work at any one time, and take breathing exercises only for short periods. From the first lessons, make it clear to the children that the propelling movements are those which are made in the opposite direction to that in which they will be travelling; otherwise they will tend to apply their effort at the wrong time. In the same way, they should relax as much as possible in the recovery movements. Land drill can be very successfully accompanied by singing, gramophone records or piano playing, and thus a rhythmical, as well as a mechanical stroke may be achieved (Diagram 1).

In a small classroom, strokes and diving can be demonstrated with cardboard figures, jointed with paper clips.

Pupils should be encouraged to learn how to breathe out under the water at home. This can be done by filling a bowl with water and putting a mirror in the bottom, and so learning how to blow bubbles while keeping the eyes open.

Breast Stroke: Land Drill

Arms—Standing or Prone

"*Ready.*" Arms forward at shoulder level, palms facing downwards, hands slightly cupped, thumbs touching

Count One or "Push" Push the arms sideways downwards until approximately a right angle is formed between the arms, with hands slightly cupped and turned outward. (This is the only propelling movement in the arm stroke.) Counteract any tendency for the old-fashioned wide sweep-round of the arms.

Count Two or "Bend." Bend the elbows into the sides and bring the hands together under the chin, palms down (recovery movement).

Count Three or "Forward." Push the arms forward to the "Ready" position (recovery movement).

Count Four or "Glide" No movement (relax).

Breathing Combined with Arm Movement—Standing and Prone

Count One and Two or "Inhale." Head is lifted as the arms are pressed down, and a breath is taken in audibly through the nose or mouth

Count Three and Four or "Exhale." Head is lowered and the breath is exhaled audibly through the nose or mouth, as the arms are pushed forward.

Legs—Standing

Count One or "Nothing." No movement (relax; the legs are together in the "Glide" position).

Count Two or "Bend." Bring one foot up, with the knee turned well out, the heel touching the other knee, and the toe pointed outwards (recovery movement)

Count Three or "Wide, Together." Throw the leg out sideways, and with a circular movement bring it smartly to the other one (propelling movement) Point out that there are two movements here, a widening and a bringing together, and it is the latter that is the propelling one. If this is not made clear some pupils tend only to bend and stretch the knees again without any leg kick

Count Four or "Glide" No movement (relax)

First work one leg several times and then the other, then alternately, but always to four
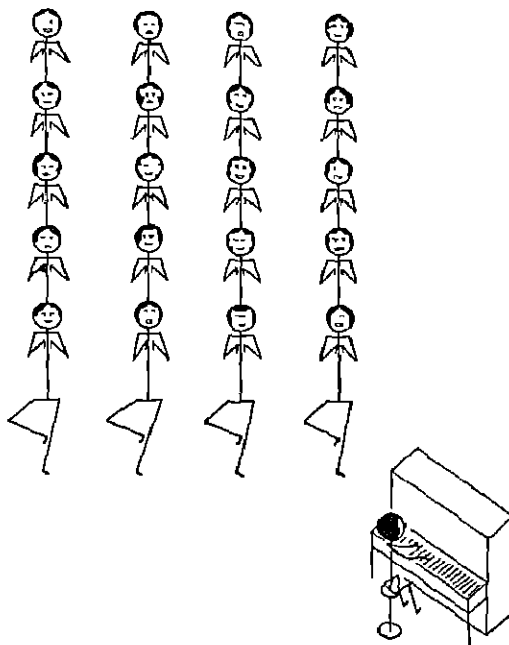
DIAGRAM I

counts. If the balance is difficult, let the class work in pairs with shoulder grasp.

Legs—Prone

The class support themselves across apparatus or backs.

Count One or "Nothing." No movement (relax).

Count Two or "Bend" The feet are brought up with the heels together, and knees and toes are turned out to form a diamond shape (recovery movement)

Count Three or "Wide, Together." The legs are thrown out sideways with a circular movement and the extended legs are brought forcibly together (propelling movement)

Count Four or "Glide" No movement (relax).

Arms and Legs Combined—Standing

"*Ready*" Stand with feet together, and arms

held forward at shoulder level (arms and legs relax).

Count One or "Push." Push the arms sideways and downwards (propelling movement for arms, legs relax).

Count Two or "Bend." A bent position for all limbs, elbows bent to the sides, and one knee bent (recovery movement for arms and legs).

Count Three or "Wide, Together." A push for all limbs, arms push forward and one leg pushes out to the side and down to the standing leg (recovery movement for arms and propelling movement for legs)

Count Four or "Glide." No movement (relax arms and legs.)

Take this practice to music or singing, using nursery rhymes, or other well-known tunes that fit the exercise (four-four time).

Arms and Legs and Breathing Combined—Standing and Prone

Short practice only should be taken, getting a rhythmical complete stroke in the pupils' own time (Diagram 2).
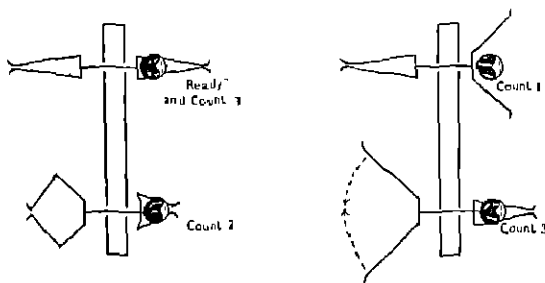
DIAGRAM 2

Front Crawl: Land Drill

Because of the difference in the physique of pupils, it will be found that when the stroke is attempted in the water, it will vary very considerably as regards the timing of the legs, the arm movement and the general poise of the body in the water. However, the following general exercises can be performed by all at first, and then the individual's own style can be allowed to develop later.

Arms—Standing

1. Starting with one arm overhead, and one at the side, circle the arms forward with clenched fists. (This is a preliminary exercise for mobilizing the shoulder joint.)

2. With one arm forward at shoulder level, the elbow slightly bent, thumb in line with nose, and fingers slightly cupped, pull arm down, still slightly bent, under centre of body (propelling movement). Lift hand near thigh, with little finger leading, and with the thumb down; swing arm forward (recovery movement). Work this arm continuously, and then the other one alone

3. Starting with one arm forward at shoulder level, and the other one at the side of the thigh, work both arms, taking one to three counts for each arm to reach the starting position of the other, and four to six counts to complete the movement

Arms—Prone. Support the legs on the floor, arch the body, and repeat with both arms working.

Breathing. The easiest form of breathing to teach in the land drill and early swimming stages is the unilateral. In this the head is turned *either* to the right or left, but not both, and then forward. The breath is inhaled through the mouth as the arm on the side is recovering; that is, if the head is turned to the left, it will be under the left arm. The head is then turned forward, as soon as the hand is level with the shoulder, and the breath is exhaled.

Legs—Standing. Brace up on the standing leg, with the toe of the hanging leg turned inwards and downwards with a relaxed ankle. Swing this leg from the hip, forward and backward, to a count of six, keeping the knee straight without being stiff. This can be taken to music, three-four time

Legs—Prone. The class support themselves across apparatus or backs, and lower and raise alternate legs, working from the hips with no stiffness in knee or ankle.

Arms and Legs Combined—Prone. The body should be arched, with the head and heels up. The complete movement of the two arms should synchronize with the six leg beats.

Arms and Legs and Breathing Combined—Prone. The head is turned to the left to inhale

FIG. I

Land Drill. Breast Stroke—Supported Arm and Leg Stroke

FIG 2

Land Drill. Front Crawl—Arm Stroke

while the left arm is recovering. The head is then turned forward, and the breath exhaled for the remainder of the stroke (Diagram 3).

Coaching Points. In these practices, it should be pointed out that the propelling power is gained by the under-water pull of the arms and the drive of the legs. The relaxation of the arms during the recovery movement should be stressed.

Back Crawl: Land Drill

Arms—Standing

1 One arm held overhead and one at the side, with clenched fists; circle the arms backwards alternately, in order to mobilize the shoulder joint

2. One arm held overhead, somewhat obliquely, with the palm facing the ground, and finger

DIAGRAM 3

tips pointed to the side. Scoop with this cupped hand backwards and downwards, until the thigh is reached (propelling movement) Turn the hand so that the back faces the thigh, and with the little finger leading, swing it up to the starting position (recovery movement).
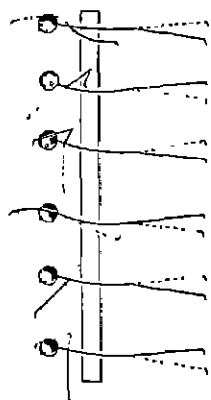
3. One arm held obliquely overhead with the palm facing downwards, and the other arm with the back of the hand touching the thigh. Change each arm into the position of the other, counts one to three, and back to the starting position, counts four to six.

Breathing As the face will be clear of the water in this stroke, the breathing need not be stressed. In the leaning-back practice on benches or chairs, see that all pupils breathe easily, as it is a strong abdominal exercise unless well supported

Legs—Supported. Sit well forward on the edge of a chair, leaning against the back of it, or on the benches or backs with shoulder support. Lift the legs off the ground, and with the toes turned slightly inwards, swing the legs upwards and downwards alternately to a count of six.

Arms and Legs Combined—Standing. Walk

backward to a count of six that synchronizes with the two arm movements.

Arms and Legs Combined—Supported. Sit on the edge of a chair, or on the benches or backs with shoulder support, lift the legs a short distance off the ground and work them with the arms to a count of six (Diagram 4).
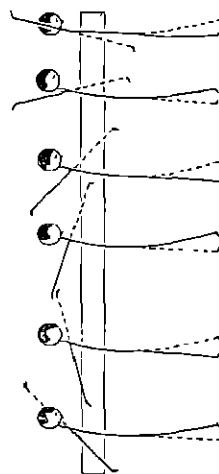
Coaching Points. In this stroke the body is a little inclined at the hips, and the knees are not generally held as straight as in the front crawl The propelling action is derived from the scooping action of the hands and arms under the water and from the drive of the

DIAGRAM 4

legs. The arms should be as relaxed as possible in the recovery movement.

Back Stroke: Land Drill

Legs—Standing. Stand on the left leg, and turning the right knee outward, lift the right foot off the ground about six inches, and about one foot behind the left leg. Then, with a circular kick, straighten the knee and bring the foot back beside the left one. Repeat with the other leg.
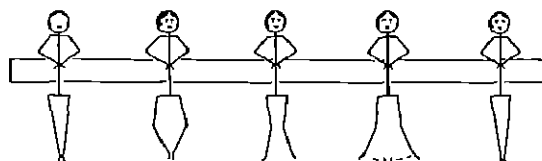
DIAGRAM 5

Legs—Supported Sit on the edge of a chair leaning against the back of it, or on benches or backs with shoulder support, and raise both legs straight forward, then bend at the knees, parting the knees comfortably but not more than a foot, until approximately a right angle is formed at the knee joint, keep the feet together. The legs should then be circled outwards and upwards, with the knees turning inwards so as to bring the legs back to the starting position (Diagram 5).

Breathing As for the back crawl.

Coaching Points. It is essential that land-drill practice of this leg kick is taken, as if it is first attempted in the water it is almost invariably an inverted breast-stroke kick, in which the knees are never turned inward.

Safety Measures

It is easy to relax but very difficult to tighten up your discipline, so start as you mean to go on. Teaching a class to swim without good discipline is not only difficult but dangerous. Particular care is needed if the class is taught in the open air.

Use the whistle as a definite signal for the class to stop work and listen to you. Girls hearing this signal should lift their caps from their ears. If some swimmers are in deep water they should go the the bath side. Curb any noisiness, unruliness or horse play from the first lesson. Make any offender instantly get out and get dressed, as it is usually necessary to do this only once.

Give the class confidence in you as a teacher by using good judgment as to their capabilities. Never let your pupils attempt to swim in deep water before they are capable of doing so, and you are ready to supervise them. When pupils can swim the equivalent distance in widths, all attempts to swim the length should start at the deep end. The child should walk down the steps and swim close to the bath side towards a pole or rope held out in front by the teacher. If necessary a strong swimmer can swim alongside as well. Never let more than one pupil at a time attempt to swim in deep water. If there are several waiting to swim the length, then be sure that the one in front has reached shallow water before the next one starts

If you enter the water with a class of non-swimmers, you should have someone else watching on the side as it is impossible to see all your pupils when in the bath.

Where possible the teacher should wear old clothes or a bathing costume so that she doesn't mind getting wet, and in an emergency can enter the water. Even if the teacher is not a good swimmer, she should be familiar with the practice of artificial respiration, and know where all

FIG. 3

Land Drill. Back Crawl—Supported Leg Stroke

the safety devices, such as poles, buoys and hooks are stored. The teacher should not allow her class to swim immediately after a heavy meal

Hygiene

Before any class visits the bath the teacher should give a preliminary talk on hygienic practices to be carried out there Pupils should not be allowed to bathe with open wounds, spots on the body, catarrh and such like.

Classes of children should be lined up and inspected if there is any doubt about their cleanliness. The lavatories should be shown to them and they should not be so hurried into the water that there is not time to visit them if necessary. This is of special importance if the class has had a bus or tram journey to reach the baths. The foot bath should be used by all, and the shower too, if possible, before entering the water The orderly and cleanly use of cubicles and dressing rooms should be observed. Girls should wear swimming caps The lesson time should not be prolonged beyond half an hour, and twenty minutes is long enough for non-swimmers. On leaving the water the class should have cold showers and then dress quickly.

WATER PRACTICE

Examples of Confidence-gaining Exercises

These are useful in making the class feel at home in the water. When the pupils realize the buoyancy of the water and its power to support them on the surface, these exercises need not be laboured at the expense of the stroke practices, as they can often be made into game-like exercises.

1. Overgrasp facing the rail, and jump up and down getting the shoulders wet.

2. Overgrasp facing the rail, put the face in the water and look at the bottom of the bath.

3. Overgrasp facing the rail, give four little jumps and duck the head right under the water on five.

4. Walk away from bath side, holding partner's hand, and back again.

5. Walk in a rank across the bath holding hands.

6. Walk with partner to make a circle in the middle and back to own place again.

7. Undergrasp with back to the rail and splash with the legs into the middle of the bath.

8. Holding on to the rail with one hand, blow bubbles under the water.

9. Walk about alone, using the arms to help.

10. Walk to make circles of a certain number, walk round, jump on the spot, duck under, "Pop goes the Weasel" and such-like.

11. Walk into a maze, all holding hands.

12. Follow my leader, hands on shoulders of one in front.

13. Waist support in pairs, and mark time with hands on rail.

14. Half the class hold hands sideways, for the other half to weave in and out.

15. All duck under a bamboo pole held at water level.

Progressive Methods of Teaching the Prone Position

1. Waist Support. Overgrasp rail and odd numbers practise standing up from this position by throwing the head backward, bending the knees up to the chest and putting the feet down flat on the bottom.

2. Waist Support. Overgrasp rail with interlocked thumbs, odd numbers keep the hands together and quietly let go of the rail, put their hands into the water, and then without haste, put the hands back on the rail again.

With extremely nervous pupils the teacher may need to hold their hands, and so lower them into the water, and then put them back on the rail again.

3. Waist Support Overgrasp rail with interlocked thumbs, repeat two, and then even numbers take one step away from the rail, supporting the odd numbers in the prone position.

4. Waist Support Repeat three, with even numbers walking several steps away from the bath side.

5. The "Glide." With arms in the "Ready'

position, odd numbers put one foot flat on the bath side and push off with it, letting the other leg leave the bottom, and so glide out to their partners. After the first attempts, encourage pupils to put their faces in the water

Progressive Methods of Teaching the Supine Position

1. Waist support, arms at the side, toes tucked under the rail. Odd numbers practise standing up from this position, by raising the

by saying, "Places—change! Who is first?" It is necessary to vary the length of the pause so that pupils are always kept on the alert and do not anticipate such commands

When even numbers are standing on the left side of their partners, at the change over odd numbers need not walk round them, but will support from the right side. In the prone and supine positions, see that pupils are held in the water, as in the early stages their partners tend to hold them half out of the water.

Discourage any attempts to turn sideways

FIG 4
The "Glide"

head and drawing the knees up to the chin and putting the feet down flat on the bottom.

2–4. Waist support, arms at the side, toes tucked under the rail. Repeat the prone practices in the supine position.

5. Odd numbers glide to their partners in the prone position, but turn over into the supine position before reaching them.

6. Odd numbers, with feet against the bath side, push off with arms at sides, or thrown overhead, so as to glide in the supine position to their partners.

Coaching Points. The supine position, and how to stand up from it, is taught when the pupils have mastered the breast stroke and are preparing to learn a back stroke.

In these practices, encourage pupils to change over quickly and yet safely. This can be done

from these positions in order to clutch at the supporting partner (Diagram 6).

Progress Check In teaching any stroke, or part of a stroke, it is necessary to check each individual pupil's progress

The pupils are lined up along the bath side and numbered. The odd numbers swim across, then the even numbers, so that general comments can be made. Later on, each pupil swims the width in turn so that the teacher can make individual comments. If the class is a large one, and time is short, then each pupil need swim only half-way across before the next one starts.

Breast Stroke: Water Practice
Arm Stroke

1. Pupils stand with their backs to the bath

side, lean forward, or kneel down, until their shoulders and chins are in the water, and practise the arm movements to numbers; then continuously, then with breathing.

2 Repeat, standing in open formation, all facing the shallow end, then with breathing.
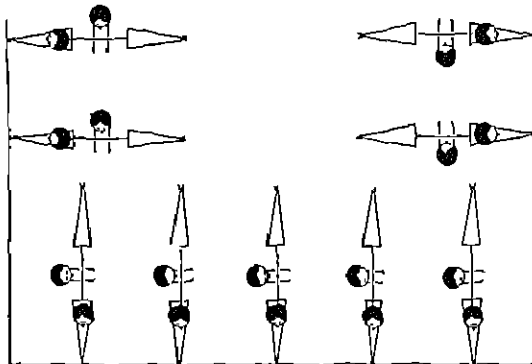
DIAGRAM 6

3. Repeat with waist support, odd numbers in the "Ready" position, the finger tips just touching the bath side.

4. All kneel on the bottom and work the arms, trailing the legs behind.

Leg Stroke

1. Waist Support. Odd numbers work their own legs while their partners count aloud

2. Towing Support. Even numbers walk across the bath towing their partners, who work their legs (Diagram 7).
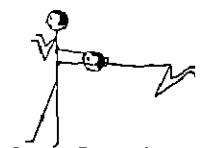
DIAGRAM 7

3. Link Support. For groups of three, numbers one and three towing the two's who work their legs.

4. Leg work, with hands on a cork or rubber float.

Arm and Leg Stroke

1. Towing Support. Odd numbers walk across the bath, working their arms, and even numbers work their legs, then with breathing instead of counting.

2. Waist Support, with fingertips just touching the bath side. Odd numbers work their arms and legs while their partners count aloud; then with breathing

3. Waist Support. Even numbers carry their partners away from the bath side, in the prone position, and odd numbers then progress to the side with the arm and leg movement; then with breathing.

4. Gliding practice in pairs.

5. Repeat, attempting to swim at the end of the glide

6. In open formation, kneel down and attempt to swim to the bath side.

Coaching Points. The body should be as near horizontal as possible, with the heels showing above the surface in the glide position after the kick on count three, and should remain there until the end of the arm movement on count one. Count one is the propelling part of the arm stroke and must be a definite push, and as the hands so press down on the water the head is lifted clean to inhale. There must be a wide opening and closing of the legs for propulsion, and care must be taken that a screw kick does not develop as the result of one knee being dropped and turned inward. If this does happen, then pupils should not point the toes out on count two, but keep the toes and heels together until the fault is corrected. The relaxation of the limbs during the recovery movements is important, and there should be a definite period of rest during the glide on count four.

Partners should count for each other when possible, so that the teacher is left free to make individual as well as general corrections. As soon as a set can swim, a progress check should be made.

Front Crawl: Water Practice

Breathing

1. Overgrasp the rail, standing or kneeling, with shoulders under the water, turn the head to the left or right and inhale—one, two, three, counts, turn the head forward and exhale in the water—four, five, six counts.

2. Repeat in all arm and leg movements whenever possible.

Arm Stroke

1. Standing or kneeling with shoulders under the water, in open formation, work the arms; then with head turning for breathing.

FIG. 5

Link Support. Breast Stroke—Leg Practice

FIG. 6

Waist Support. Prone Position away from the Rail

2. Walk across the bath working the arms, then with breathing.

3 Wheelbarrow Support. Even numbers first stand still, then walk forward across the bath, while odd numbers work their arms; then with breathing (Diagram 8).

4. Arm practice alone across the bath, letting the legs trail behind

Leg Stroke

1. Waist support, partners counting aloud or singing.

2. Odd numbers work their legs and turn their heads for breathing whilst their partners count "In, two, three; out, two, three."
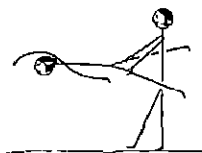
DIAGRAM 8

3. Towing Support Even numbers walk across the bath and their partners work their legs, then with head turning for breathing.

4. Link Support. In threes or small groups of uneven numbers, repeat across the bath

5. Divided grasp on rail, leg work alone; then with breathing.

6. Glide with the head down between the arms, work the legs, but allow only the heels to break the surface.

7. Leg work across the bath with hands on a cork float.

8. "Dog Paddle" With the hands cupped, the arms reach forward and press backward alternately under the water. The two arm movements synchronize with the six leg beats. The head is held up looking forward; then with head turning for breathing.

Arm and Leg Stroke

1. Towing support Odd numbers walk forward working their arms, and even numbers work their legs; then with breathing Later on, partners' movements should synchronize to make one complete stroke between them.

2. Alone, walk across the bath working the arms only, then let the legs come up to the surface and finish using the arms and legs; then with breathing.

Coaching Points. The stroke should not be taken as a whole until the separate arm and leg movements are correctly performed. The leg

stroke and dog paddle arm action with breathing are taught at first, and then the arm stroke added later. Care should be taken to see that boys breathe regularly, and do not swim twenty yards on one breath thus becoming exhausted. The position of the body should be an arched one with one arm forward, the back somewhat hollowed, and the heels breaking the surface in the leg kick. The shoulders should be kept as square and as steady as possible, specially when the head is turned to breathe, so that rolling is reduced to a minimum. There should be economy of effort in all movements, avoidance of stiffness, and real relaxation in all recovery movements. A progress check should be made as soon as a set has mastered the dog paddle.

Back Crawl: Water Practice

Leg Stroke

1. In pairs practise lying in the supine position and standing up from it

2. Waist Support. Odd numbers undergrasp the rail or overgrasp the trough and work their legs

3 Circle Support, Facing Inward. Odd numbers with head held up to look at the toes, work their legs.

4. Rank Support. Even numbers walk across the bath while their partners, with heads held up, look at their toes and work their legs.

5. Link Support in Threes. (Suitable when only a few pupils are learning the stroke, or when the water is too deep for rank support in large numbers to be possible.)

6. Shoulder Support Odd numbers' feet should first touch the bath side and they must start quietly. If they push off strongly it is very easy for them to push their supporting partner over backwards (Diagram 9).
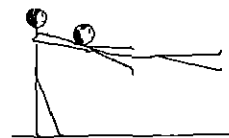
DIAGRAM 9

7. Odd numbers push off from the bath side, and working their legs, attempt to reach their partners, standing half-way across the width. Even numbers must move forward to pick up their partners if necessary.

8. Leg work alone with partner at the side,
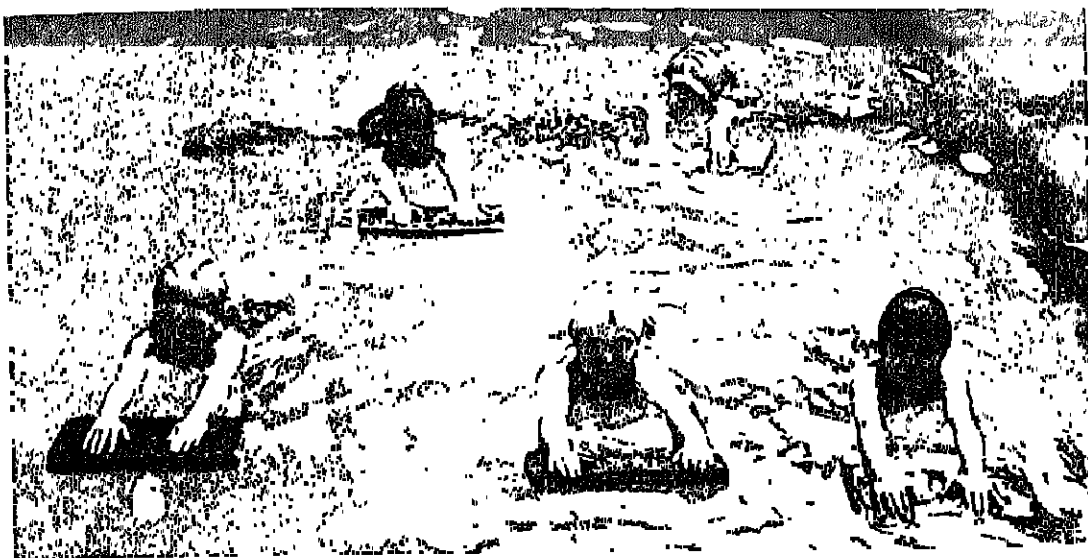
FIG. 7

Front Crawl—Leg Stroke, using a Cork Float
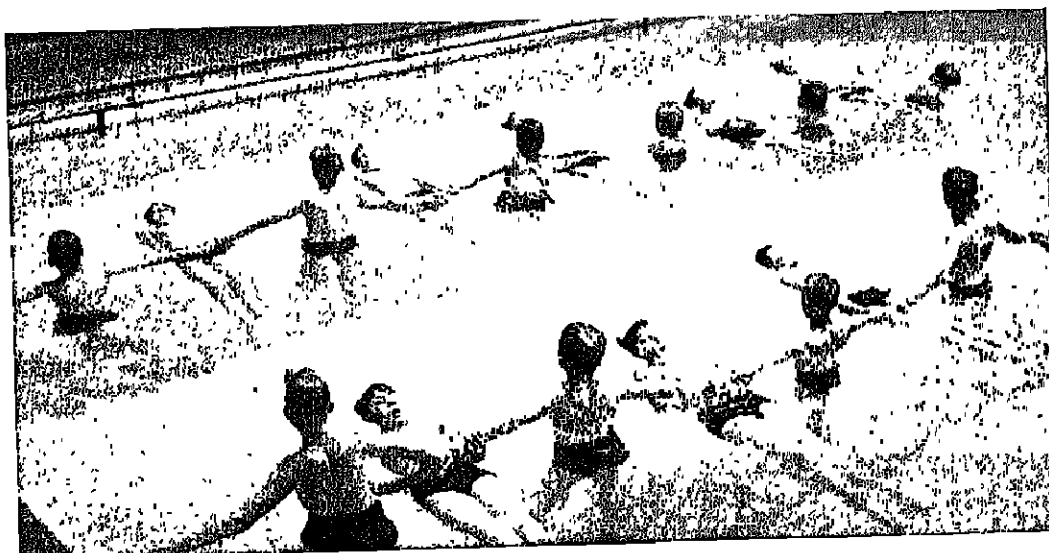
FIG. 8

Rank Support. Back Crawl—Leg Practice

helped by a sculling action in which the hands, held at the sides, are slightly cupped, and rotated with a circular action from the waists.

Arm Stroke

1. Odd numbers tuck their toes under the rail and work their arms.

2. Windmill Support. Odd numbers look up at their partners and work their arms. Even numbers first stand still and then walk forward across the bath (Diagram 10)

Arm and Leg Stroke

1. Odd numbers attempt the whole stroke, to reach their partners standing half-way across the width

2. All walk backwards working the arms and then let the legs come to the surface and finish the width on the complete stroke
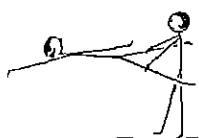
DIAGRAM 10

Breathing. This need not be stressed as the face is clear of the water, looking at the toes.

Coaching Points. The back and front crawl leg work can be taught at the same time, as the two help each other. The arm work can be added later. Back crawl is more easily mastered than the front crawl because of the easier breathing. The body position should be such that the head is raised forward, eyes looking at the toes, which only just break the surface, and with the hips slightly bent. The shoulders should be square and higher than the feet. The propelling action is derived from the underwater scooping of the hands and arms, and the drive of the legs. A progress check should be made as soon as a set has mastered the leg stroke with sculling.

Back Stroke: Water Practice

Leg Stroke

The same methods of support can be used as for the back crawl.

Breathing. Need not be stressed.

Coaching Points. This leg kick can be taught either immediately after the breast stroke or after the crawl strokes. Great care must be taken to ensure that the kick is not an inverted breast stroke. The dropping back of the legs,

and the propulsive swirl in which the knees turn inward, must be correctly performed. The arms can scull at first to assist the movement, and then can be in the hips-firm position with thumbs forward. Later the arms should be folded on the chest to prepare for rescue work in life saving. Although in learning and practising the back stroke the leg kick is followed by a glide, yet this is not possible during life saving rescue practices. This is because the subject's legs hang down in the water causing an obstruction, and the rescuer has to make a continuous circular kick without the subsequent glide.

Diving

Confidence Exercises

1. Immersion of head in different exercises, such as looking at the toes or touching the bath bottom.

2 Push off from the bath side and glide on the surface with the face well down between the arms.

3 Repeat with the eyes open, so that the learners are able to stand up as soon as they reach a certain line

4 Push off from the side and glide obliquely downward to the bottom of the bath.

5. Repeat, but in order to regain the balance, bring the knees forward as though to kneel on the bottom, and so stand up.

6 Repeat the oblique glide, but having touched the bottom, the fingertips should be turned upwards, and the pupils will then float to the surface.

7. Stand on the bottom step, at the shallow end, with arms overhead and thumbs interlocked; lean over, bend the knees and push the hands under the water, so as to glide in head first.

8. Repeat, progressing to the top step, provided that the water is deep enough for there to be no danger of pupils hitting their heads on the bottom of the bath.

Sitting Dive

1 Over water at least 3 ft. 6 in deep, all sit in turn on the same spot on the bath side, with feet on the rail, toes turned out and knees well apart. The thumbs are interlocked, and

FIG 9
Circle Support. Back Stroke—Leg Kick
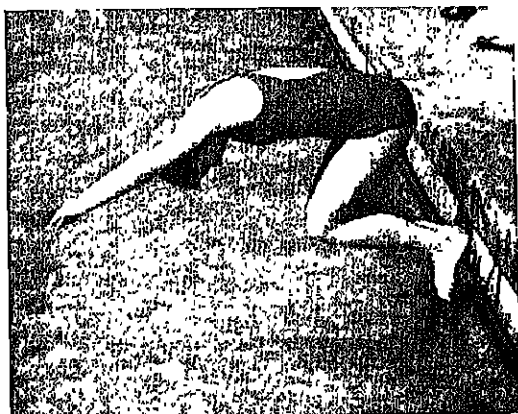
FIG. 10
Sitting Dive
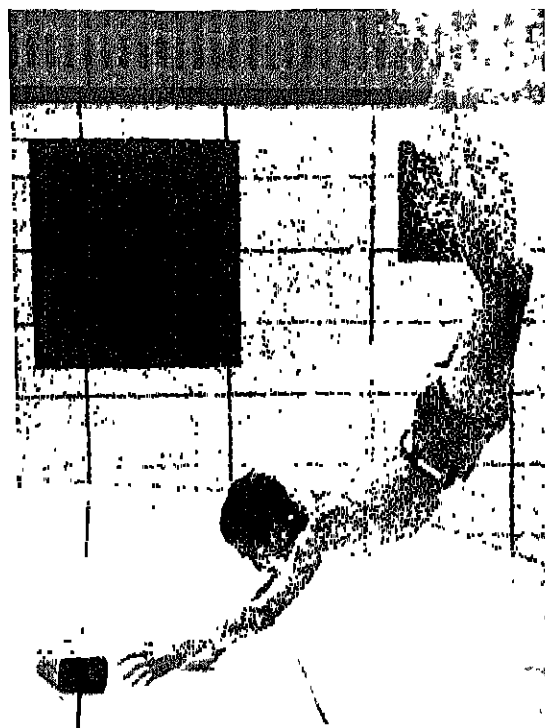
FIG. 11
Surface Dive for Brick

arms carried so far over head that the ears are in front of the arms, and the head is well down with the chin in. The teacher stands behind the pupil and gives hip support, with fingers forward and thumbs back. The pupil then leans over towards the water, and the teacher does not release the low hips-firm grasp until quite sure that the pupil will make a head-first, and not knee-first, entry into the water. A catcher stands in the water and assists the diver to stand up (Diagram 11).

2. Odd numbers sit on the bath side with feet on the rail, and lean over towards the water Even numbers, standing in the water at the side, take their partner's hands in one of their own and gently lower them head first into the water.
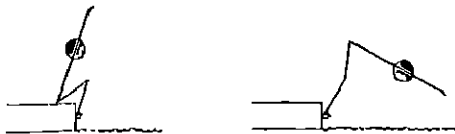
DIAGRAM 11

3. Repeat, but partners assist the odd numbers only to stand after the dive.

Coaching Points. Pupils must lift up the hips and stretch the knees from the sitting position, and pushing off with the feet, enter the water obliquely and not vertically. In the early stages there is a tendency to drop in knees first, or even somersault over if the hands are not pointed far enough out. The head must be kept well down between the arms, for if the face is lifted a pancake dive will result. Teachers should always supervise this practice themselves until the pupils' performances are fool-proof. Most pupils having performed a sitting dive correctly can pass on to the beginner's dive. Individual pupils, however, may need to pass through the intermediate stages of the crouching or half-standing dives.

Half-standing Dive

Pupils stand with one foot forward, toes gripping the bath edge, knees bent and the other foot behind (Diagram 12). The arms are held overhead, thumbs interlocked and head well down, and the body is inclined well forward. The back leg can then be held up, or can kick upward, and is joined by the front

leg, causing the body to tip into the water head-first.

Beginner's Dive

The teacher stands at the side of the pupil, whose toes overlap the edge of the bath with
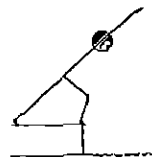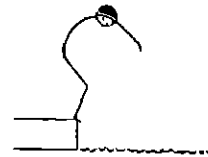
DIAGRAM 12　　　　DIAGRAM 13

feet together. The pupil then carries the arms overhead, interlocks the thumbs and keeps the head well forward so that the ears are in front of the arms. If necessary, the teacher assists the pupil to lean over towards the water; then the knees are bent. The knees are then straightened with a little spring upwards, pushing off from the balls of the feet, and so causing the body to enter the water head first (Diagram 13).

Plain Dive

In the "Attention" position the feet are placed together with toes gripping the edge of the bath The arms are lifted forward to shoulder level, shoulder width apart, palms down. The arms are then taken down to the sides, palms backwards and the knees bent,
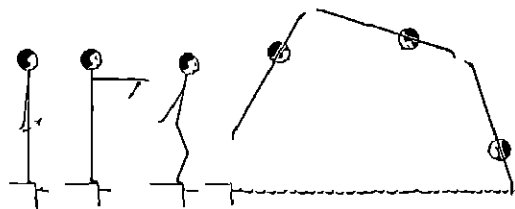
DIAGRAM 14

and straightway the arms are swung forward, upward, overhead whilst the knees are stretched to give the necessary spring upward and forward. The hip, knee and ankle joints should all assist in this movement, and the toes give the final push off from the bath side. The body and knees should be kept straight and the toes pointed during the flight. The whole body should enter the water through the hole made

by the hands. The entry should be made at an angle of 70° to almost vertical, according to the depth of the water and expertness of the diver (Diagram 14)

Coaching Points. The upper arm should be close to the head so that it is not thrown back, and the chin should be in. The knees should be kept straight and feet together, but the body must not rise up on to the toes when the arms are carried to the sides. Although individual pupils will achieve an entry of 70° it is better

and will need other work if personal effort is to be encouraged. In a class of mixed ability, if the teacher concentrates on the non-swimmers, with no grading of the swimmers, they are not likely to progress. Certain authorities award certificates for particular tests, but if you draw up your own series of tests, do not make the last one too easy. As an alternative to certificates, stripes can be sewn on the costume for each test passed. This makes the splitting up of the class into graded sets very simple.
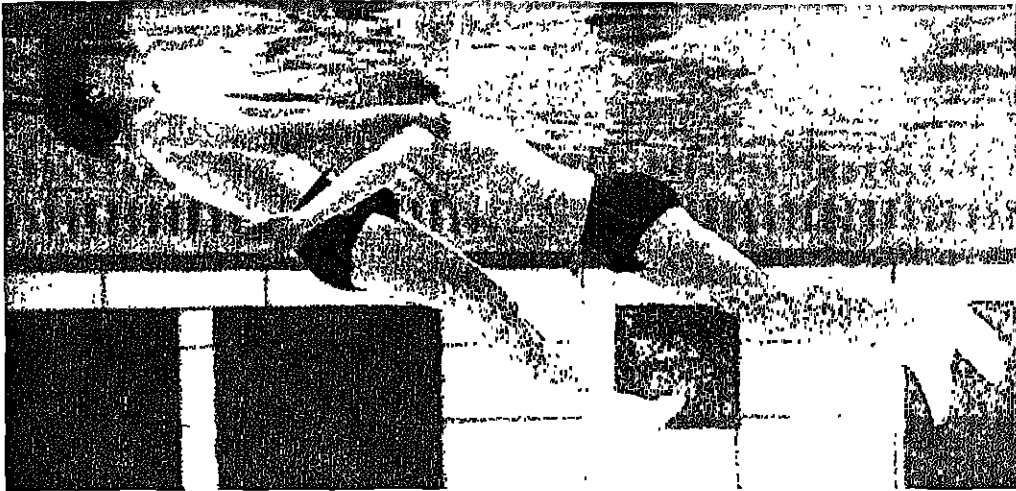
FIG. 12

Fourth Method of Rescue—R.L.S.S

to coach classes to make straight dives at an angle of 50° rather than bad dives at a more obtuse angle.

Life Saving

Primary school children are eligible to take the Elementary Certificate of the Royal Life Saving Society All particulars concerning this subject can be obtained from the *Handbook of the Royal Life Saving Society.* Surface diving can be taught to the swimmers in the class, even if no other life-saving work is done (Diagram 15).

Scheme of Work

It is essential that some type of grading be included in any swimming scheme. Individual beginners will progress very quickly,

Class Arrangements

Non-swimmers Class In the first lesson the aims should be to establish the confidence of the class in you as a teacher, and real enjoyment of swimming. Some pupils will prove to be very timid, whereas others may swim the width in their first lesson. The first lesson should always be a short one, as it is better to get the class out when they would like to have longer than to let them get chilled.

It is wiser to hasten slowly in the early stages, and get the individual movements correct before attempting the breast stroke as a whole When pupils begin to swim, the grade testing should start, for one pupil swimming the width acts as a great incentive to others. Pupils who can swim a width only with an effort should continue to work under the teacher with the

non-swimmers, so as to perfect their style. When some pupils can swim a width with good style, they can form a group attempting to swim three widths, which is often the equivalent of, or a little more than, one length

Such pupils, having swum 25 yards under the teacher's supervision, can be grouped together for crawl practices under a leader who is in the water with them, while the teacher continues to instruct the non-swimmers. It is a good plan
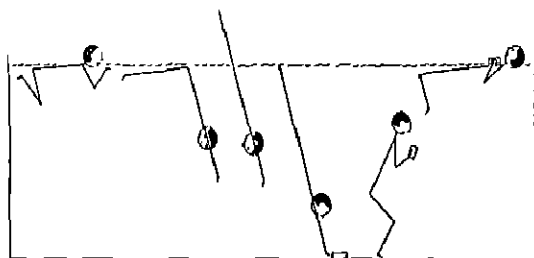
DIAGRAM 15

to give the leader written instructions for each lesson, but only of work that has been previously taught or explained. These instructions should be written in pencil, as ink gets blotchy when the paper is put down on the bath side Later in the lesson the teacher should make a progress check, and teach additional activities to this smaller group, and also give instruction in diving. During this time the non swimmers can either go on practising or get out.

Class of Mixed Ability. In the early stages, the non-swimmers and beginners should work together under the teacher's instruction The swimmers should be grouped under leaders according to ability, and work to written instructions. As soon as the non-swimmers have reached the stage of the towing support, they can be left for short periods while the

teacher makes a progress check of the swimmers, and also teaches new practices

Artificial Aids

Where class teaching in pairs is possible, then other aids are needed only in certain instances. However, there are occasions when supports are essential—

1 In an open-air bath where the bottom is too slippery for partners to support each other safely.

2. In open-air conditions when it is too cold for partners to stand very long to give support.

3. When the bath is shared with others, necessitating the use of the deep end for some of the practices.

4. For correcting or perfecting a swimmer's style.

5. Occasionally one pupil is just not able to swim without individual help. The teacher, failing to get a swimmer to help or going in herself, must then use some form of support such as a belt.

There are many types of artificial aids some of the more usual ones are cork, wood or tin floats, inflated supports such as water wings, rubber rings, or the strap-on sausage type, and teaching belts.

Conclusion

As a teacher you should remember that how you feel about a subject is instinctively apparent to your class, so let your enthusiasm and confidence be reflected in your pupils' attitude to swimming. Nothing is more encouraging than seeing children attain a definite object, such as learning to swim, a skill which once mastered will ensure them not only safety but hours of pleasure.

DANCING

" . . . our principle carries us further It leads us to advocate the claims of a physical culture which includes physical training and efficiency but goes beyond these, since it includes also training in comely posture and movement on social occasions This is not merely teaching manners it is something much more broadly and essentially human. It includes that kind of sensitiveness which Plato spoke of as eurhythmia and valued highly because . . . it was likely to run out into many expressions of man's nature in his work Dancing is a chief means of cultivating it—provided the dances do not aim at a cheap and superficial "gracefulness" but are . . . full of aesthetic quality as genuine as it is delightful and not only linked with but expressive of simple and beautiful music "—REPORT ON THE PRIMARY SCHOOL, 1931

THERE is probably no subject now on the time-table of the Junior School which admits of such freedom of handling as that of Dancing, nor one which is more dependent upon the equipment of each individual teacher Nor, perhaps, is there any subject in which the teacher has, in her own training, received so little preparation Therefore, although there are on the market an enormous number of publications of ready-made dances, many teachers are not in a position to interpret them, nor to teach them with such results as would satisfy the composer. This should not be, for although even a simple running or skipping step will have as many subtle differences as there are children in the class, yet there should be in every teacher's knowledge of dancing, a criterion of what is good movement and bad, what is the technical defect in this child's running, what makes this child's skipping look finished and good, wherein lies the grace of this movement and the lack in that. Good movement, graceful gestures, poise, balance, style—these are not mere accidents of endowment. Some children undoubtedly possess them to a greater degree than others, but every child can be taught a great deal from which will result a general improvement in all these directions, and the least gifted child can begin to acquire something of the sense and form of good movement which comes naturally to a few—but very few—children.

There are established now throughout the country, in addition to the English and Scottish Folk Dance Societies, several schools of dancing; the Revived Greek School, Margaret Morris School, Madge Atkinson School, and the Operatic and Cecchetti Schools of Classical Ballet. Any teacher who has time and enthusiasm to study at first hand one of these forms will then have at her command a definite technique which she can build upon or modify and adapt to her own special needs. For the vast majority, however, this is, unhappily, a counsel of perfection In this chapter, therefore, it has been thought best to outline a scheme of work embodying a technical background which can be used, developed, and progressed by those teachers, many of whom have a great love of, and feeling for, dancing, but who have not been able to develop a method of training their children so that steady improvement can be made, and the same systematic progress noted that, for instance, follows on the use of the Physical Training syllabus. To this end a course of 10 lessons will be discussed Probably under average school conditions a year would be required to work through the scheme, and many alterations will no doubt suggest themselves to individual teachers, since conditions of footwear, floor space, and duration of lessons vary very much Nevertheless, it is more satisfactory to teach with even a skeleton scheme which is aiming at a definite result, and much more can be achieved in a given time under such conditions.

We will assume that in the Infants' School the children have been taught chiefly dramatic dances involving nothing much else than "free" movement, and that they know nothing of the set forms of dancing, and have no finish or style. From now onward this is to be the pill sandwiched in with the jam, and it is worth while, therefore taking great pains with the first elementary lessons For the sake of method, it is useful to construct each lesson under headings, just as one does for the Physical Training class, and as is done in every School of Dancing.

For our special purposes we will use six head-ings—

A. Exercises in Rhythm.

B. Fundamental positions and movements to be learnt.

C. Stationary exercises as preparation for movement and steps.

D. C made into movements.

E. C and D applied to steps.

F. Study or dance based on A–E.

Before proceeding to our scheme, a word as to footwear The ideal dancing shoe is undoubtedly the soft shoe of the ballet dancer—not blocked at the toes for "toe" dancing, but the soft shoe worn by beginners The sole is narrow and flexible, and extends from the base of the toes to within about 1 in. of the heel only. The soft canvas top is prolonged over the toes and under the heel, thus allowing full freedom of move-ment for the foot If any imitation of this can be made, the results will repay the effort a hun-dredfold, for freedom for the toes and the joints of the feet is imperative for the full physical value to accrue from dancing technique.

With regard to the use of the feet, certainly in "natural movement," such as walking and running, the foot should point straight forward In the schools of dancing which advocate the straight foot for *all* movement, the technique is built up on so-called natural movements. This technique must be learnt at first hand, and cannot be taught by writing about it. The opposing schools advocate the out-turned foot for all stationary exercises and steps, most of which cannot be performed at all with the straight-foot position. Care must always be exercised in teaching that not only the *foot* is turned out, but that the turning comes from the *hip*. In making this effort, muscles are auto-matically brought into play which have an enormous influence on good posture It is for this reason that ballet dancers have such strong backs and well poised heads. At our stage we shall use a very moderate out-turning of the foot only, needless to say.

One further word on the subject of nomen-clature. It would be easier in the following syllabus to give definite names and numbers to positions of the feet, arms, and body which recur frequently, but the writer has avoided

this temptation purposely, because such de-scriptions have their own context, and removed from that would be subject to legitimate criti-cism. Thus Fig. 16 has no right to the classi-cal ballet description of *Arabesque de face* unless eventually we mean to use the fully out-turned hip and foot—which we do not. Similarly the "straight" and "ecstasy" hop (Fig. 17) is so described in the convention of the Revived Greek School, and since we are not using that technique we prefer to treat it with respect and coin other descriptions for movements which are allied to, but do not conform to, the standards and aims of that school

Similarly, our exercises in rhythm have no relation to the teaching of music by the rhythmic movement of the Dalcroze School of Eurhyth-mics, and so the terminology of that school has likewise been avoided, although much of its teaching is extremely valuable in the foundation work of dancing.

Lesson I

Group A Exercises in Rhythm. The pianist plays ¦ rhythm, varying the *tempo*, slow, quick, quicker, slow again, and so on. The children follow the music, moving freely about the room without any directions from pianist or teacher. They should learn to stop as the music stops, and to begin again in accurate *tempo* as the music begins once more. After a few lessons the music should stop at different *tempo*, and the children be encouraged to finish in a pose of their own choosing Thus, if the music has stopped after gradually slowing down, the final position would be different from the ending on a quick high run or after a series of quick loud chords Various dramatic positions—crouching, listening, reaching high, etc., will no doubt suggest themselves to the children

Group B. Fundamental Positions to be Learnt. Throughout everything that we teach in this scheme great insistence must be laid on *Posture The good dancer must be recognized in the play-ground,* in the classroom, and in the street, by an added "something," and that something is graceful posture. For of what use else is dancing if it does not permeate the whole physical ex-pression of the dancer? Therefore, spend time

in gaining the interest of the children in the fundamental position shown in Fig. 1. Note the position of the feet, called 3rd position, one slightly in advance of the other, heel to instep. Use this position as a rule, rather than 1st position, in which the heels are together. Notice the straight knees and in-drawn abdomen which is not causing a hollowing of the back, because the hip muscles are tightened with the out-turning of the feet and because the shoulders are pressed down and the back *lengthened*. Note the strong but easy holding of the arms and the head lifted and tilted in harmony with the body but without any exaggeration.

Teachers should make this holding of the body the keynote of every lesson, for it spells health, grace, dignity, and self-control.

Now opening the arms sideways, hold them momentarily as if holding the skirt, elbows well

FIG 2

Preparation for Arm Movement

Correct arms   Note rounded position well away from body

out but yet without tension, the weight of the arms being held by the muscles which lift the arms in the shoulder joint only   Practise this simple movement, opening and closing, over and over again until it becomes natural   Use rhythm, counting gently 6 beats to open, 6 to close, then more quickly, 3 instead of 6.

Now, instead of opening the arms sideways, raise them in front of the body to form a circle in front of the face. Be infinitely careful that this is a pure arm movement, and not a tilting backward of the body with the knees bent, or it

FIG. 1

First Fundamental Position

Feet are in third position and arms in "preparatory" position ready to move Notice how very slight is the tilt of the head which yet is sufficient to make the picture harmonious

will look like Fig. 4 instead of Fig. 3 (it is a sad reflection on the uncritical eye of some teachers that photographs appear in published dancing books with the children in just such positions as Fig 4). Note that the arms are well in front of the face, so that the head can move easily, and the shoulders can be pressed down. Be *sure* the knees are straight.

as in all movements, that the head is well lifted and moves with slight restrained movements.

Then pass on to the next group, viz.—

Group C. Stationary Exercises. Heel raising and knee bending is an old friend. For dancing take it with heels together, and also from 3rd position It serves to strengthen the foot muscles and give elasticity to ankles and knees, but it

· FIG. 3
Arm Raising · Correct Position

It is still difficult to the young model, as can be seen by the slightly raised shoulders By making the right effort, at each lesson, however, she will gradually perfect the position so that eventually she will be able to raise her arms whilst maintaining the body poise of Fig 1

Practise moving the arms up and down in this position, slowly and quickly, always moving as if in one piece from shoulder to wrist, freely swung from the shoulders, the body held firmly, abdomen in, knees straight. Be careful in this,

FIG 4
Arm Raising Incorrect Position

This is due to tilting the body and allowing the knees to bend whilst raising the arms.

should be taken with a small bend only of the knees, the heels being allowed to sink during the movement, thus stretching the calf muscles and Achilles tendon, tightness in which prevents good springs and soft landings. A firm push up on to the toes, knees *very* straight, hands held out as if, or actually, holding the skirt, or in the preparatory position, as in Fig. 1; then a bending of the knees, pressing outward as hard as

possible Take slow music, then quick, press the feet firmly on the floor throughout. Try to stretch the ankle joint to its fullest, and force the instep over the toes in rising. Repeat a dozen times slowly, then another dozen quickly. Use strength in every movement. If the children cannot balance, let them take each other's hands, but insist that they work hard and strongly at mobilizing the foot and ankle.

A few children are born with a natural ability to use their feet well, but most need to be made "foot conscious" So begin with a simple lifting of each foot in turn, leaving only the toe on the ground. Stretch the ankle to its fullest and press the knee well sideways (see Fig 5). Remember to use the *good poise* of Fig. 2—abdomen drawn in, *back long*, arms soft and held out from the sides, head very slightly tilted to the left when lifting the right foot, and *vice versa*. Repeat several times with slow, strong movements. Tell the children that the foot should be held so strongly that it could not be lifted from the ground by another person. Do the movement say 16 times with one foot, then the other, then each in turn. Now repeat, but this time lift the foot a few inches off the ground. The previous practice should have given the feeling of a stretched foot, so there should now be no difficulty in getting the "pointed" toe of the dancer. Lift in one count, return to position in the next; repeat several times with one foot, then each in turn.

Group D. Using all that has already been learnt in regard to foot training and posture, this last exercise is easily made into a dancing movement under Group D by adding a spring from foot to foot. Helped by the knee bending exercise of Group B the spring should be lighter and softer than it would otherwise have been, and because the foot position has been practised as a stationary exercise the movement should be neat and accurate

It is as well at this point to discriminate between a "spring" and a "hop." A spring is taken from foot to foot without any intermediate rebound or hop on the supporting foot. Thus the movement under discussion, if taken to the tune of "Oh dear! what can the matter be?" would consist of a spring on the right foot

on "Oh," on to left on "dear"; on to R on "what," and on to L. on "matter."

Group E. These steps must be simple at this stage. The class may be in a circle or other convenient formation, singly or in couples, and will move forward or round the room Use slow music thus—Step forward on R. foot on 1,

FIG. 5
Foot Lifting Exercise
Taken without a shoe to show strong holding of the foot.

bring L. foot through on 2, and hold momentarily as in the last exercise, Group D, gently stretch L. knee and hold a few inches from ground on 3; repeat these three movements beginning with L foot and bringing R. through. Such songs as "Pretty Polly Oliver," "Robin Adair," etc, played slowly make useful accompaniment for this type of movement

Change then to bright skipping steps to ¦ and ⁂ music. Practise free skipping, then introduce the arm movements of Group B, lifting upward

for 4 skips, head following the arms, then, because it would not be a pretty movement to bring them down in the same way, open them quickly and press the hands backward as in Fig. 18 for the next 4 skips, repeat again, lifting upward for 4, a quick opening and press back for the next 4. The natural dancer will soon use her head over one shoulder for the second part, and droop softly forward a little.

Group F. A dance or study built on this amount of teaching would be of the simplest description. The dramatic sense of the children has, we hope, been fostered in the Infants' School. At this stage the foundations of dancing have been laid on a very limited technique and, therefore, it is better to keep the dramatic element foremost and the steps unimportant. Take therefore an idea such as a game of "Hide-and-seek," and work it into a tiny study. Brahms' Vocal Waltz No 6 lends itself to a quick little running movement with appropriate pauses, and the study can be worked out thus—

Bars 1–2 Children scatter in all directions running with quick excited little steps, 3 to a bar Run 6 steps.

Bars 3–4. Stand shading eyes with hands, looking quickly right and left.

Bars 5–6. Turn, run in another direction.

Bars 7–8 Stand looking backward over shoulder first right then left.

Bars 9–10. Run into groups in centre of room, crouch kneeling on one knee, head down, looking backward over shoulder.

Bars 11–12. Jump up, run to left, pause looking momentarily over L. shoulder.

Bars 13–16. Scatter with a rush, crouch in a corner as if hiding.

This is a very simple little study as regards the actual dancing, but an immense amount of expression can be introduced into the quick, excited movements. Encourage the children to show by their faces the feeling of the dance, and try to get good postures even in such momentary movements as are used here. Use head, arms, and body freely in these elementary dramatic dances. The dancing forms will gradually improve as the technique used in each lesson bears fruit, but do not impose the technique. Let it gradually supersede the uneducated movement of this stage.

Lesson II

Group A (*a*) Class moves in circle with hands joined, to ¦ music, 8 walking steps, 8 skips. Repeat several times. Repeat but alter direction for skipping steps, e.g 4 into centre, 4 backward and out, arms swinging upward on first 4, down on second 4.

(*b*) Run round the room, hands free, to ¾ music, 12 forward, 6 back, 6 forward Turn and repeat in opposite direction. Make the change from forward to backward as smooth and easy as possible. Take long flowing running steps and, as an easy and expressive use of the arms is valuable, the position shown in Fig 18 may be used in the forward running Encourage spontaneous expression, but, since this is a movement primarily for rhythm, train the children's ears and feet to an accurate response to the music.

Group B. (*a*) In the first lesson the first and third positions of the feet were indicated. Now, beginning from first position, push the R. foot sideways without any movement of the body, and without transferring the weight on to the moving foot, until only the toe is left on the ground. Do not reach out uncomfortably. Drop the heel, equalize the weight of the body, and, besides giving the instep a nice strong exercise, *we have arrived at the 2nd position of the feet.* For Junior class work this position is not used much, but the accurate neat moving of the foot sideways is useful in many ways Lift the heel and bring the foot back to 1st position

(*b*) For arm work, the same lift upward as in Lesson I and Fig. 3, then open and down to the preparatory position of Fig. 1 There are two big pitfalls in this opening, the first and biggest being the dropping of the elbows, as shown in Fig 7 By studying Figs. 6 and 7 the teacher will do much to eliminate this fault. The second mistake very often seen is pressing back of the arms and poking forward of the head as the arms open and descend. Bear in mind the position of poise of Lesson I, and this mistake will not occur. The elbows should always pass in front of the hips, and the arms should always return to the position in Fig. 1, *never hanging idly by the sides or stretched as in drill.*

Group C. (*a*) As *C* Lesson I, then add the position shown in Fig. 8. Mark time lifting the heel only until the children are thoroughly aware of this joint of the foot; then mark time, leaving only the toe on the ground, as Fig. 5; alternate these two exercises, pausing in each position

(*b*) Holding skirt, feet in 1st position. Point R. foot forward, then close feet in 1st position.

Group D Point the foot as in Group C, then transfer the weight of the body on to it, slightly lifting the back foot with ankle fully stretched Put the weight again on the back foot and lift the front. Practise this movement holding the skirt, body well poised, until the transferring of the weight from one foot to the other in the forward and backward direction can be made

FIG. 6

Correct Opening of Arms

The shoulders are a little too high, but this is a fault which practice will correct.

FIG. 7

Incorrect Arm Position

The elbows have dropped

Repeat with L. foot forward Remind the children to stretch the ankle fully and hard, and use the head—*lifted, not dropped*, and slightly tilted Use all rhythms, altering the feeling of the movement with each. Familiar songs are useful for cultivating a sense of the feeling of a movement in all these exercises. Contrast the expression, for instance, of "Marching Home to Georgia" to "Coming thro' the Rye," yet both would be suitable rhythms.

without any loss of balance or poise. Repeat, of course, with either foot in front, and to slow or quick time and different rhythms

Group E. (*a*) Quick skipping as Lesson I *E*.

(*b*) Slow skipping to ¦ consisting of step on 1 —foot through on 2—foot stretched on 3 whilst supporting leg gives a small hop This soft skipping step is useful for many types of dances The difficulty consists in making the whole a smooth light movement It will be noticed that the preparation for this was made in Lesson I.

(c) Running—soft flowing steps, arms lifting upward for 8, opening as learnt in Group B for the next 8. There should be a natural lifting up and back of the head in the first 8 steps, and a slight relaxing forward as the arms open and fall. Remember Lesson I—that the arms are not lifted too high—and Lesson II—that they

FIG. 8
Ball of foot firmly on the ground

open widely with lifted elbows　Refer again to Figs. 3, 4, 6, and 7.

This movement may, of course, be practised in ⁷₁ rhythm, 6 up and 6 down, and ⅟₁, four up and four down.

Group F. For the remaining section, choose a piece of music that the children know, or play it sufficiently often for them to remember it, and ask for original dances, short little studies rather than anything elaborate　Encourage the children to compose, not so much for the value of the dances as for the imaginative effort required. The time spent thus will be well spent,

for when, later on, more ambitious dances are being learnt, the result will be infinitely more alive and expressive than if the children have merely been taught, and faithfully reproduced what they have learnt

The successful development of this section does, however, depend very much upon the individual teacher's own capacity for composition, and her ability to draw out ideas from the children and incorporate them into movement.

Original work should be encouraged throughout the lessons. Special mention of this will not be made again, but it should go side by side with the rest.

Lesson III

Group A. (a) ⁴₁ music　Walk 4 steps to one bar, 2 to next.

(b) ⁴₁ slow music, 2 slow skips (2 bars) followed by six runs (2 bars)· the soft "hop" of the skipping step should flow easily into the first running step, and the first "step" of the slow skip should follow the last run without a jar This smooth melting of steps into each other is an important part of training in rhythm *Rhythm in movement does not consist merely in keeping correctly to the beat of the music.* Use the arms with the opening movement learnt last lesson

Group B. (a) As in Lesson II, B, begin with feet in 1st position, holding skirt, change to 2nd position as before by moving the R foot, then lift the R. heel and draw the foot in again, but instead of returning to the 1st position bring the heel to the instep of the L foot, arriving at 3rd position of the feet　Notice that this numbering refers to either foot, so that the R. foot is in 3rd position in front and the L. behind　Similarly, had the R foot been drawn in with the instep to the heel of the L. foot the feet would still have been in the 3rd position, L in front, R. behind (see Figs 1 and 3).　Practise the movement to 4 counts, point toe in 2nd on 1, sink heel and take 2nd position on 2 ; lift heel on 3, draw in to 3rd position on 4. Work slowly and strongly, then sharp movements but still strong. The foot when pointed in 2nd position should be held so strongly that it cannot be picked up by another person.

(b) The movements of the arms so far have consisted of a small opening from the preparatory position sideways and a lift upward opening sideways. Now add a more difficult movement, viz., lift half way as if raising overhead, and, when at shoulder height or rather lower, open the arms, arriving as shwon in Fig. 9. Here again beware of dropping elbows. The curve should be maintained, and the arms moved from the shoulders. Count 3 or 6 for the first movement, 6 or 12 for the arm parting, and 3 or 6 as they sink. Let the head incline slightly to right or left.

Group C (a) Standing in 3rd position holding skirt (or arms in a relative position) lift the heel of the front foot, then the toe, draw the toe up the side of the supporting leg as far as the knee, pressing the moving knee well out and back Travel down the back of the leg and return to 3rd position behind Repeat with the same leg, finishing 3rd in front. Repeat ten or twelve times. This is a quick strong movement, excellent training for the instep and for the back, *provided the correct poise of the body is maintained,* and *the knee of the moving leg pressed back in both halves* of the movement.

(b) Starting in position as (a), point L. foot behind, then close behind again in 3rd.

This is similar to the pointing forward of the last exercise. In pointing behind, aim at very straight knees and rotate the leg outward from the hip so that the side of the big toe rests upon the ground (see Fig. 9). Repeat this several times with L. foot then bring L. foot in front in 3rd position and point R. foot behind. Practise first with the arms low in the preparatory position, and then in the new position just learnt (Group B, (b)). Be careful that there is no pushing forward of the hips, but that the correct poise of the body is maintained throughout the exercise

Group D Beginning from 1st position, step sideways on R foot, leaving L. pointed in 2nd; pause, close L foot to R in 1st position. Repeat, beginning with L. In the pause move the head with a slight inclination away from, and turning toward, the pointed foot Accompany the stepping sideways movement with a small opening sideways of the arms as in the first lesson.

Group E. Quick skips forward and backward

in groups of 8 steps, 12, 6, etc., using the arm lifting and opening. Backward skipping is often very clumsy at first. A useful method of practising is to introduce a pushing and pulling expression into it—each child taking a partner, facing with joined hands one leans back and pulls whilst the other imitates the action of

FIG. 9
Graceful Arm-opening Exercise
Arms held in correct position whilst returning to preparatory position of Fig 1. Left foot is "pointed behind."

pushing. By this device the step often comes naturally, if without much finish.

Group F With a simple tune such as "The Quaker's Wife," use the steps and technique of the first two lessons in constructing a simple dance.

Formation, a square, boys and girls, standing facing a partner, in good dancing positions.

Bar 1. Point R. foot forward and replace it in 1st position.

Bar 2. Repeat with L. foot.

Bars 3-4. Three little jumps, and nod to partner.

Bars 1-4. Boys turn R. and girls L. and repeat with side partner.

Bars 5-12. Give both hands to side partner, and skip 8 steps round, ending in own places

Bars 5-12. Repeat with own partner.

Second Time

Bars 1-4. Point and close as 1st time with own and side partner.

Bars 5-12. Take hands across with side partner, all lean back and pull, skip 4 steps, boys moving backward, girls forward, 4 more, girls moving backward, and boys forward. During these 8 skips couples have changed places.

Repeat this figure with own partner, ending in own places.

Third Time

Bars 1-4. As before

Bars 5-8. Walk 4 steps to centre, step R. and bob, step L. and bob.

Bars 9-12. Walk 4 steps back to place, bob to side partner, bob to partner.

This forms a complete contrast to hide-and-seek, in as much as it demands accuracy and some technique of movement   Note the improvement of using a dramatic device such as slowing down bars 11 and 12 for the last bob.

In the bob the boys should stand with heels together and straight knees, back of hands on hips, elbows well forward, then bend slightly from the waist.

The girls hold skirts.

Remind all dancers, boys and girls, to look at their partners when dancing "social" dances of this sort.

Lesson IV

Group A. (*a*) $\frac{3}{4}$ music, walk 3 steps to 1 bar, 1 step to next.

(*b*) Walk 4 steps, clap leaning to the R. for 4, walk 4, clap L. for 4.   Ask the children to suggest other actions.

Group B. Standing in 3rd position, practise lifting the arms overhead and opening as in

Lesson II Then raise them but pause at a point rather lower than the shoulder height.   From this mid-way position lift one up as usual and the other sideways, arriving at the position shown in Fig. 10.   Lower the high arm, pass through the position shown in Fig. 9, and sink both arms ready to begin again   Remember that

FIG. 10

Arm Movement: Upward and Sideways

Arms as in Lesson IV   Foot pointed in second position

we have already learnt that the arms come back to the preparatory position of Fig 1 and never hang by the sides.   This position should be practised carefully.   It will take some time to perfect it. $\frac{3}{4}$ music counting 6 for each change of position is most suitable.

Group C   Feet in first position, holding skirt. Point one foot forward; lift; point, return to 1st position   Repeat with each foot in turn.

Group D   Arms as in Fig. 1, feet in 3rd

position, R. in front L. behind. Point R forward then close to 3rd position; point L. backward, then close to 3rd position as before. Take this firstly in 4 counts—point, close, point back, and close. Then beginning from "point" count one, in which the R. foot returns to 3rd and simultaneously the L. foot points back; count two, in which the L. foot cuts in to 3rd and the R. simultaneously points forward. This involves a small spring in order to effect the change, and in this form the supporting knee will bend slightly in order that the spring shall be soft and without a jerk

Group E. (*a*) Moving round the room, holding skirt. Point and step thus: point R as in Lesson II on 1—step on to the pointed foot on 2. Both the "point" and the "step" should be preceded by a lifting of the working leg in which the body is held poised and does not move from the waist As usual, vary the rhythm and *tempo* used Notice how the expression of the movement is changed according to the music.

Quick bright movements $\frac{2}{1}$,—

"D'ye ken John Peel with his coat so gay"
point and step   *point and step*

Gently, $\frac{3}{1}$—

"What's this dull town to me?"
Point   *Step* (Robin Adair)

Evenly, $\frac{4}{1}$—

"The minstrel boy to the war has gone."
point   *step*   *point*   *step*

(*b*) Using the exercise of Group C of last lesson add a tiny hop and practise the step familiar in jigs as "snatches." It is performed thus: From 3rd position, bring front foot, with knee pressed back as learnt, to 3rd position behind Repeat this movement with alternate feet, thus travelling backward with small steps Between the placing of one foot in 3rd behind and the lifting of the front foot is a tiny hop, almost a shuffle, counted on the "and" in $\frac{6}{8}$ rhythm, "one—and two—and" signifying step, hop—step, hop The accent being strongly marked on the "step" and weak on the "and." In $\frac{2}{4}$ the difference would be less marked, and care must be taken that it does not become an ordinary skipping step This is avoided by maintaining the character of the step, this being

expressed in the use of the 3rd position on the floor and the neat raising of the foot and out-pressed knee in the changing round of the feet.

To "snatch" forward, begin from 3rd behind and close in 3rd in front, the second half of the preparatory exercise of Lesson III

Group F Combine walking, running, and skipping steps in various ways to form little short studies. For example, Dvorak's "Humoureske" lends itself to a pattern thus—

2 slow skips, 4 runs in circle, counter-clockwise, hands joined

Repeat.

1 skip, 2 runs, 1 skip, 2 runs

Each child runs 8 steps, making its own circle clockwise, and finishes in own place facing in opposite direction ready to repeat whole clockwise.

Endless varieties of this idea will occur to the resourceful teacher, and the co-operation of the children can be gained by inviting suggestions. At this stage there may also be used with advantage some of the simple dances published in book form, *e g. Simple Group Dances* by Ruth Clark (Curwen, 5s 6d). These are useful, but the illustrations do not conform to the teaching here given as to arm work and poise The dances, however, are simple, and the music both suitable and good.

Lesson V

Group A. Music is played, changing without warning from $\frac{4}{4}$ to $\frac{6}{8}$ and $\frac{9}{8}$. Children follow, walking to $\frac{4}{4}$, skipping to $\frac{6}{8}$, and slow skips to $\frac{9}{8}$.

Group B. As last lesson.

Group C A combination of the "point and lift" foot exercise of last lesson, and the arm positions learnt Using $\frac{3}{4}$ rhythm taken rather slowly—

Bar 1. Arms forward, point foot forward.

Bar 2. Arms open sideways, lift foot

Bar 3 Sink and point foot as bar one.

Bar 4. Arms softly to preparatory position, draw foot in to 1st position again

By now the teacher will be on the alert for any bending of the supporting leg or tilting back of the body on the first bar.

Group D Holding skirt—on 1 step sideways on R foot, leaving L. strongly pointed; point L.

forward on 2; step sideways on L. on 3; point R. forward on 4. Repeat *ad lib* to $\frac{3}{4}, \frac{1}{4}, \frac{4}{4}, \frac{6}{8}$ rhythms.

Group E. Preparation for polka and barn dance steps. In a circle round the room or with hands joined. Step forward on R , close L. in 3rd position, step forward on R., with a smooth movement, foot well stretched, bring L. through and stretch ready to begin again on L foot. Make this an exercise in neat footwork

Group F : Study. This is suitable for "Gavotte" (by Mchul) or 16 bars of similar music

8 *bars.* "Step—close (in 3rd)—step and through," (as Group *E*) counter-clockwise, hands joined, 8 times.

2 *bars.* 6 swooping running steps to centre, i.e tiny steps, arms gradually rising overhead, stand on toes, arms high, heads thrown back

2 *bars.* Six gentle running steps backward, then stand, tiptoe, hands low and back, leaning forward a little.

2 *bars.* Run 4 in, 4 out, arms swinging up, then down.

1 *bar.* Run 4 in.

1 *bar.* Turn slowly on toes, releasing hands, then rejoining facing outward.

Repeat whole, facing outward and running outward with free arms. On last bar, kneel gently, sit back on heel, stretch front knee forward, bend low with arms outstretched.

Lesson VI

There is now quite a lot of material to draw upon for practice in rhythm, so that, whilst making this the primary aim, use dance forms and movements when possible.

Group A. $\frac{3}{4}$ slow rhythm, walk 6 holding skirt, then stand with one foot pointed forward, raise arms overhead, and open sideways for next 6.

(*b*) $\frac{4}{4}$: walk 8 steps; stand whilst arms lift overhead for 2; R. arm sinks sideways to shoulder level for 2; L. arm similarly for 2; both down for 2. Repeat with L. arm opening first. Use the arms not only to mark the pulse of the music but as additional practice in the dance form of arm movement.

Group B. Practise the position shown in Fig. 11. From 1st position of the feet bring

one foot behind, then the other Press the knee back strongly and stretch the ankle fully. The usual mistake is to curl the foot round the supporting leg. Make sure the toe is pointing backward and that the side of the foot is against the back of the supporting leg. Notice the turn and tilt back of the head, which can be taken to either side It is useful to practise also from

FIG. 11
Foot Position for Hop or Spring

3rd position, using the back foot several times in succession.

Group C. In 4 counts, arms lift forward to below shoulder level, R. foot points forward , L. arm up, R. sideways, raise R. foot (see Fig. 12), L. arm open sideways to balance R., R. foot pointed on toe; arms down (to Fig. 1 *not* hanging by sides) and foot to 1st position Repeat on opposite side.

Group D Step sideways with R ; close L. behind in 3rd, step sideways again with R. and hop, bringing L. foot to position in Fig. 11.

Repeat to L. This constitutes a polka step sideways. Practise this in couples, holding hands face to face and gradually introduce the step turning round each other. Slow ⁴⁄₄ music.

Group E. "Step and throw," a familiar step now done easily and well, we hope, since it consists merely of a step sideways or obliquely forward, followed by a lifting of the leg as in

FIG 12

Balanced Arm and Foot Movement

Not a very good position of arms; the shoulders are drawn up and the L hand should be turned slightly to the ground.

Fig 13, accompanied by a hop on the supporting leg. Slow ⁶⁄₈ music is most suitable, e.g. "The Lincolnshire Poacher" or strathspey

Group F. Solo dances are not very suitable for school work, but occasionally a simple dance is useful provided that it is taught to the whole class "Mary Mary Quite Contrary" has no difficult steps, and depends entirely upon the expression put into it by the child It can be begun in this lesson and finished in the next.

"*Mary Mary Quite Contrary,
How does your garden grow?*"

Music "Kate Greenaway." Harry Farjeon. No 2 of *Two Fanciful Dances.*

(Publishers. Boosey & Hawkes, Ltd., 295 Regent Street, London Price 2s 6d)

FIG. 13

"*Step and Throw*"

The raised leg may be higher provided the balance of the body is not spoilt.

Basket in R. hand.

Hold dress L.

Bars 1–2. Begin centre back, 4 skips forward, R L R.L.

Bar 3 Point R foot and lift to knee with hops.

Bar 4 Point R foot, then L

Bars 5–8. Repeat 1–4 beginning L.

Bars 9–10. 3 skips diagonally forward R.L R., kneel on L.

Bars 11–12 Pick flower left hand and place in basket.

Bar 13. Quick pick of flower and place in basket.

Bar 14. Rise with weight on R. foot, turn to L. leaving L. foot pointed, place basket in L hand, R. hand to skirt

Bars 15–16 4 steps across front to the left, L R , L.R.

Bars 23–24. Quick run diagonally back to L in pursuit of butterfly, leap on to L. on last beat of bar 24, hands up above head together as if catching butterfly ; miss it.

Bars 25–26. Turn round and round on spot, on toes to L. opening arms, still looking, stop facing front having seen butterfly again.

FIG. 14
" Mary, Mary" : A Good Position

FIG. 15
"Mary, Mary, Quite Contrary": Bad Dancing
The left arm is lifeless and the head dropped

Bars 17–18. Step forward L., bending down to put basket on the ground and to pick up watering-can in R. hand, and turn R.

Bars 19–21. 6 walks on toes across front, watering garden

Bar 22 Step forward R., kneeling to put down can, catch sight of butterfly and turn head sharply over L. shoulder, arms back (4th beat of bar) on either side (eager). Rise quickly on last beat of bar 22, played *rallentando* ; keep weight on R.

Bars 27–28. Repeat bars 22–24 diagonally forward to L. this time catching it, R. leg stretched behind (this should be beside basket).

Bars 29–30. Slowly lower arms to peep at butterfly.

Bars 31–32. Step forward with R foot diagonally to R., letting butterfly go, open arms and watch it.

Bars 33–34 Place weight on both feet, bending knees to pick up basket in R. hand, change weight to back L., leaving R. pointed

basket held high, L hand holding dress Pose (Fig. 19)

Bar 35 to end. On 2nd beat of 35 begin to skip gaily round to R. and off

Lesson VII

Group A. (a) ⌐ rhythm. Walk 8 steps, then point one foot, and with little hops on the other,

in one count, making the very slightest wave like motion in doing so, by a lifting and sinking of the wrists

(b) Practise the position of the foot shown in Fig. 17.

Group C. A spring from foot to foot in the position of Fig. 11.

Group D. (a) Point forward, back, forward, and close whilst hopping on supporting foot.

FIG. 16

Arm Movement · Forward and Sideways

FIG. 17

Foot Brought to Front in Hopping Position

tap the ground 8 times. Repeat using the other foot for the taps Repeat but walk 10 and tap 4, then 12 and tap 2.

(b) The arm movement of Lesson IV taken in 4 movements, running 3 to each movement.

Group B (a) Arms lift forward, below shoulder level, turn palms to the ground, open one sideways, turn wrists in both cases very slightly outward (see Fig. 16) The arm is relaxed at the elbow in both cases, but not bent sufficiently to show an angle. Change the arms

Pass the foot neatly from front to back with knee pressed out and ankle stretched.

(b) Standing in circle, hands joined, or in couples, bend one knee up, dropping the head forward; carry knee and head back to position of Fig 18 Practise this several times with a loose hip movement, relaxed shoulders and head in the forward movement, and strong lift and bend in the backward

Group E Polka step going round the room, to ⁴⁄₄ and ⁶⁄₈ music With the latter it becomes

slower : Step—close in 3rd—step and through, popularly called the "Barn-dance Step."

Group F. Finish "Mary Mary Quite Contrary."

Lesson VIII

Group A. (*a*) Running 8 steps, each child

FIG. 18

A Graceful Bending Movement

See lessons 7 and 10

making a circle counter-clockwise on its own Curve smoothly and continue clockwise for another 8 runs (making thus a figure 8). Repeat with skipping steps Repeat with polka steps, 4 to each circle. Repeat with 8 polka steps making one circle, as in " The Sailor's Hornpipe."

Group B. Arms as in B last lesson, at same time, point one foot backward on the toe. Practise lifting the leg and holding the position shown in Fig. 16.

Group C. Little springs from foot to foot in the position shown in Fig. 17

Group D. (*a*) Step and throw, arms as in Fig. 12 changing in one movement, i e lift one arm and lower the other with each change of leg Practise on the spot until the arm and leg movements go easily together

(*b*) In circle, hands joined for support. R. knee up, head bent forward as in last lesson; then, instead of carrying the R knee back as before, put the weight of the body on to the R foot and bend back the left as Fig. 17 Thus, R up, L. back, rather quickly Practise this transference of weight with knee bending up and back until it has become quite familiar, to slow waltz, one movement to each bar, and to quick, gay music

Group E. Round the room, step and hop with the leg straight in front, arms as Fig 9. This is distinguished from "step and throw" by the fact that it is taken straight forward and not from side to side.

Group F : *Group Polka.* In 2 lines of 4 facing each other.

I 2 *bars.* "Point-and-step" forward twice, beginning R., forming one line, meeting partner by R. shoulder.

2 *bars.* Twice more, passing.
2 *bars.* 4 snatches back to place.
1 *bar* A little jump sideways to R.
1 *bar.* A little jump sideways to L
8 *bars.* Repeat whole passing L. shoulders.

II Passing R. shoulders
1 *bar* Point R. forward, then back
1 *bar* Polka step forward.
2 *bars.* Repeat with L.
2 *bars* Repeat with R.
1 *bar.* Turn with 2 little springs (Fig. 11).
1 *bar* Two springs facing partner (Fig. 17).
8 *bars.* Repeat whole to places

III. 1 *bar* Polka step sideways to R.
1 *bar.* Point L. in front
2 *bars.* Repeat to L.
2 *bars* Repeat to R.
2 *bars* Step sideways on L and point R. forward. Turn L.
7 *bars.* Travelling in a circle half way round, 7 polka steps, shaking finger over alternate shoulders to girl behind

1 *bar.* Face partner, clap; and throw arms wide.

16 *bars.* Repeat whole to places

IV. Take both hands with partner opposite, holding arms wide.

1 *bar.* Front heel on ground. Then toe

1 *bar.* Polka step round each other to partner's place

6 *bars.* Repeat 3 times.

Take ordinary ball-room grasp and polka with partner in any direction.

A useful introduction to this may be found in the "Odd Man Polka" published in *Rhymes and Dances for Little Folk* (by C. Sparger—Nisbet, 6s.). The music would be suitable for either. In the "Odd Man Polka" the game element is introduced by having an odd man who has to jump into the gap in a change-over of partners. Polka step sideways only is used and, as a game-dance, serves to make the polka rhythm and step familiar

This and the first two figures of the group polka are suitable for this lesson.

Lesson IX

Group A (*a*) Running, changing the arms as in Group *D* of last lesson, 6 runs to each change. Take exactly 6 runs for each change of arms

(*b*) 6 runs, 2 slow skips to 4 bars, 1 step to each of next 4 bars.

Group B. As last lesson in 3 counts Thus arms lift forward, point foot back; arms take up position, raise back leg (Fig. 16); arms lower, foot into 3rd position

Group C. Practise the two little springs of Lesson VIII, alternating the "behind" and "in front" positions of the foot.

Group D. The knee up and back of last lesson but with the addition of a hop, thus—Step on R., L. knee bent back (Fig. 18) and hop on R.; step on L., R. knee up in front and hop on L. As usual the rhythm used will alter the character of the step, but the slow waltz on ⅜ is most suitable

Oh – – dear – – What can the mat-ter be?

Step R – hop R, step L – hop L, step R   hop R, step L, hop L
L. knee   R. knee up
bent back   in front

N B. This is quoted as suitable in rhythm rather than in content

Group E. One hop as Group *D*, followed by 2 hops with knee straight.

Group F. Figs III and IV of group polka

Lesson X

Group A Music changes between ⅜, ⅜, ⅜. When it is playing ⅜ children respond with polka step, changing on ⅜ to walking steps and on ⅜ to barn-dance step, No warning should be given of the changes

Group B. As *B* in last lesson.

Group C From 3rd position, lift front foot to position as Fig. 17, return to 3rd position, lift back foot as in Fig 11 return to 3rd position behind. Practise this first with the R. foot in front and then with the L.

Group D As Group *C.* with a spring from foot to foot

Group E Hopping steps round the room in the position shown in Fig. 16 A slow waltz or, better still, mazurka rhythm is most suitable for this. The change of arms should be done softly, on the first beat

Group F. A short study is useful here to combine the various hopping steps round the room. Those practised have been—

A. Hopping with knee bent up in front.

B Hopping with knee bent up behind.

C. Hopping with knee straight in front.

D Hopping with knee straight behind.

E. Step and throw

Take Brahms' Waltz No. 1—

In a circle, arms free.

Bar 1 Hop *A* (as above) on R. foot.

Bar 2. Hop *B* (as above) on L. foot.

Bars 3–4 Hop *C* twice R. and L.

Repeat whole 3 times more, using bars 5–8, and 1–8 again.

Bars 9–11. 9 swift long running steps beginning with R.

Bar 12. Step R. on toe, poise as in Fig 18

Bars 13–14 Repeat, poising on L toe

Bars 17–20. As 1–4

Bars 21–22 As 1–2.

Bars 23–24 Run swiftly forward, finish poised on toes, feet close together, head thrown back, arms high outstretched.

This little study lends itself to high controlled springing and a good deal of expression according to the ability and temperament of the dancer

Further Suggestions

This course of lessons does not, needless to say, cover anything but a fraction of the steps

FIG 19

Good Poise

This gives the impression of body movement, whereas in reality there is very little bending but all the rules of good posture are in play.

and movements which can be used in school dancing, but it is not possible within the compass of one chapter to do more. Should more be required in actual dances, side by side with those given, there are many useful books published *Easy School Dances*, by Ruth Clark has already been mentioned, and *Display Dances for Junior*

Children, by D. Carter, and *Rhythmic Dances*, by S. Carson, published by Saville (2s. 6d. and 3s. 6d respectively) are adequate, although the music is commonplace in these. Messrs. Pitman have published a book by Celia Sparger, specially prepared for Junior Schools, the dances being simple and embodying fairy stories such as "The Twelve Dancing Princesses," etc., set to classical music. The Waverley Press has published one or two good collections of ideas and dances.

The Scottish Country Dance Society publishes the Scottish country dances through Messrs. Patersons, 27 George Street, Edinburgh. We have not mentioned the English country dances since by now they are within reach of every teacher, and, without question should be incorporated into every child's education. Country dances of other nations have a habit of losing their character when danced by untrained dancers It takes a supremely well-trained artist-dancer to reproduce the simplicity of the folk dance of another nation. The steps are usually simple enough, but that queer elusive something that makes it look Swedish or German or Austrian or Scottish cannot be reproduced by children born in a different tradition. Nothing could be simpler than the Tyrolean waltz, but the style of the dancer is something that only the most highly trained dancer could reproduce, when she is able to express with subtlety the simplicity of the native Equally, English children can dance the steps of the Scandinavian dances, but they look in no degree Scandinavian, and, therefore, national dances should be regarded not as the first steps but rather the last.

In regard to that well-known institution, the annual display. It can, and often does, prove the undoing of both teacher and children, for it may easily interfere with any steady plodding towards acquiring a groundwork, and the dances attempted are frequently far too ambitious. Dancing should not be regarded as a show thing, but if it is presented before an audience the teacher must develop a critical eye, and this will save her from many a misguided effort If there is to be an audience, then the work presented must have real dancing merit, not be bad work covered by pretty clothes and a skilful pianist, as is very often the case For dancing,

if appreciated rightly, has a very far-reaching educational value. It is not only recreation and exercise, but it has its own very peculiar value.

The Value of Dancing

The word "self-expression" has been used so freely during the last few years that, as is frequently the case with a word, its real meaning is often ignored, and it is translated roughly into "leave the children alone, to do exactly what they like, when they like, and how they like, at all times and in all places, regardless of any trouble or inconvenience they may cause to other people." One hesitates, therefore, to use the word, and yet when one tries to explain wherein lies the special virtue of dancing the word "self-expression" does seem to be necessary. It can, however, be amplified, and it may be said that dancing is bodily action conveying ideas in dramatic form, the expressing in movement of the emotions by means of the beauty of shape and form.

Suitable Music

One final word in regard to the choice of music. Even for the most elementary exercises, good music can be found. As already indicated, national and folk music—jigs, reels, songs, etc., make excellent timekeepers. In addition there are one or two publications specially suitable for technique and rhythmic work. *Classical*

Extracts for Dancing collected by Mary Rosman, L.R.A.M. and Grace Philips (Boosey & Hawkes, Ltd., 7s. 6d.) is an excellent book, and *Rhythmic Games for Little Folk* by Dora Pardoe (Nisbet & Co., 6s.) is a collection of good music with suggestions as to its use. Where these suggestions are dramatic and imaginative, they are good, but the occasional dancing forms (e.g. "Minuet," Beethoven) are not so suitable. As a collection of ideas and music, however, it is most useful.

Five Rhythmic Marches, by Frances Linden (Saville, 2s.) is an excellent group of | music.

The School Gramophone

Lastly, the gramophone! This can be a great solution of the music problem, for it is possible by its use to secure good rendering of good music instead of necessarily confining oneself to the simplest written score, as must otherwise often be the case. Appended, therefore, is a list of records which will be found to be useful.

Columbia Records

D 1635. Gigue—Bach. 4s., plus 1s. 9d. purchase tax. (Piano—not suitable without an amplifier.)

H.M.V. Records

C 1617. Waltzes. 4s., plus 1s. 9d. purchase tax.

HYGIENE AND HEALTH EDUCATION

HABITS

GOOD health is founded on the acquisition of hygienic and cleanly habits. When an action has been performed a sufficient number of times it becomes a habit, or reflex action, that is to say, an automatic movement or set of movements; just as it is a reflex action to pull the hand away from a source of heat, so it becomes a reflex habit to the properly trained child to have the bowels open at certain times of the day, and go to sleep at other times, and to be in many other respects a reasonable and orderly member of the community. Children who are brought up with no habit training are notoriously difficult to manage Capricious in their habits, they will do a thing one day and for no apparent cause refuse to do the same thing the following day. This leads to endless discussion, unhappiness, and failure in health, for a happy mentality is essential to good health.

One cannot think in "watertight" compartments, or separate completely the structure (anatomy) of the body from its physiology (working) or hygiene (health). Many other instances will arise where the application of our knowledge to life must be noted.

Hence, later in this section will be found a short account of "How the Body is Made," which includes some simple description of the working of the body.

Habit Training

Systematic habit training must not be too rapidly nor too rigidly enforced. The one end to aim at in teaching health is to make it entirely unconscious. There must be no idea that instilling certain principles into children's minds will make them well or keep them healthy The automatic establishment of definite habits will achieve this end, without setting up ideas which may focus attention too closely on the child's own body

Those in charge of children, therefore, have a most important and valuable task. It is in their power to establish, in a pleasant way, these good habits which will stand the child in good stead throughout life. Habits can be started from the first week of existence; for example, regular feeding, attention to cleanliness and to the functions of Nature, and the training of the baby in regular hours of sleep (probably the most valuable factor in producing a healthy and tranquil child).

To establish good habits in older children is more difficult, for many bad habits may already have been set up; but it is better for the teacher to try to establish new good habits rather than to point out to the child any bad ones which he may already possess. This fact must never be lost sight of by those in charge of children, because the constant emphasizing of a wrong habit by "nagging" merely serves to impress this habit on the child's mind.

It is a great help for a child who has come from a bad home to be encouraged in the right way of living by community habits, and that is why a school often has such an excellent effect on a child's character.

Habit is a great labour-saving device, accomplishing the routine order of life which otherwise becomes tiresome or annoying, and one of the most important habits which the young child has to learn is cleanliness

1. External Cleanliness

Cleanliness, which is so often reckoned next to godliness, is not an easy habit to establish in overcrowded slum dwellings In the school it is also sometimes difficult to achieve where one thing is preached and another is practised. For example, the floors of the school building may be washed once in three weeks, as those find to their cost who sit the children down on

a dirty floor; children will notice this dirt, and draw their own conclusions.

The washing of hands before meals, attention to hair and finger nails, and similar tasks, are all somewhat irksome for the young child, but when done in company are less of a burden, and can be made into a game. It is most important to remember that good habits can be made as amusing as bad ones, and infinitely more pleasant to the individual

The days are gone by when there were a large number of verminous children among the schools, and no child should ever be penalized if it is so unfortunate as to harbour parasites of one kind or another. Remember that little children are extremely sensitive about their personal appearance, and they usually wish above all things to be exactly like their fellow mortals A lousy head may be the origin of complexes which may mar the happiness of the child's whole life.

Bathing and Washing

Cleanliness of the body is a difficult thing for the young child to achieve, and some open-air day schools are so fortunate as to have baths provided for daily use. Once the children have learnt the pleasant effect of having a complete bath every day, they will do their best to get it, or the nearest substitute, in their own homes. The rubbing of the skin has the effect of massage, improves the circulation, helps the digestion, and, what is not to be ignored, increases the beauty of the child's appearance Without inculcating any ideas of vanity, the teacher should see that children take sufficient pride in their looks.

The usual facilities for washing in many of the elementary schools are exceedingly primitive, consisting generally in the provision only of cold water It is impossible to remove dirt from the hands with cold water alone, especially in the winter, and the fact that children come from homes where there is no running warm water is no reason for the continuance of this mediaeval habit of providing only cold In fact it is an argument to the contrary, because children who have once enjoyed the amenities of frequent and easy removal of dirt, from any part of their bodies, will, when they

become grown citizens, refuse to tolerate dirty conditions in their homes.

Care of the Hair

Let us consider the question of the child's personal cleanliness in detail, beginning with the head. The care of the hair is one of the most important parts of the child's daily toilet—a difficult task for any child under the age of 10, but one that is related both to health and personal appearance A verminous head can be the cause of tremendous suffering and ill health, firstly because of the irritation, and secondly because this irritation may lead to scratching infected raw places on the scalp, and swollen glands, and may ultimately result in some degree of blood poisoning. Tending the hair with dirty combs or brushes is worse than useless, and one of the habits that children can be taught easily, as they grow a little older, is to wash the comb and brush at least once a week.

Care of the Ears

An important organ of the body which demands a care that it seldom receives is the ear. A word of warning is necessary against the introduction of any pointed instrument into the ears to remove wax. The folded edge of a towel is nearly always adequate for this purpose. If the wax is difficult to remove wrap cotton wool round the end of a match and dip this into olive oil; this softens the wax, and the child's ear can easily be made clean. It is a common mistake among parents to be much more insistent on washing behind the ears than on getting rid of dirt in the outer ear, though wax is often the cause of deafness and stupidity in school children

Care of the Eyes

The eyes of a debilitated child may be found stuck together in the morning with small granulations or running sores along the lids The smearing of boracic ointment along the lid the last thing at night will prevent this occurrence; bathing with warm boracic lotion first thing in the morning and last thing at night is an even better treatment Any child who is continually disposed to this condition of granular lashes, or

"blepharitis" as it is called, should have the eyes examined to see if there is any defect of vision.

Care of the Nose

This has been the subject of much instruction and attention during the past few years. It is necessary to impress on all children, however young, the importance of "nasal drill," which should consist of the proper use of the handkerchief first thing in the morning or on arrival at school. The nose should be held at the bony part, and each nostril in turn occluded whilst the other is blown firmly, but not too vigorously; the use of any irritant snuff powder is to be deplored. Children who suffer from catarrh should be allowed to snuff up gently some glycothymoline in a little water (half a teaspoonful to a teacupful of warm water) and spit it out through the mouth. This is an effective douche of the nasal passages, will often cut short a cold in its early stages, and is not too unpleasant for a small child to perform. Syringing of the nose should on no account ever be done except under the supervision of a doctor or a nurse, as it may lead to infection of the small bones which separate the nose from the skull itself.

Teeth and Throat

The care of the mouth is rather intricate, involving attention to the teeth and throat. Teeth need to be brushed with a soft brush and camphorated chalk powder from the time a child is about a year old, and children should be taught that a toothbrush is a personal possession to be kept clean and dry, and replaced as soon as it shows any signs of wear.

It is far more necessary that the child's throat should be looked at every day for signs of redness or white spots than that the cleanliness of neck and ears should be rigorously enforced. Children who attend school with inflamed throats should always be sent home again, as the throat is the source from which a great deal of disease spreads from one human being to another. The number of germs which are projected in coughing or speaking have been variously estimated from one to several millions, and hence the great risk which is attached to

the overcrowding of children at school. Every one knows how rapidly a cold will spread through a household, and this is the reason.

Attention to Septic Places

The toilet of the face and head is thus rather complicated, and very important. The cleanliness of the hands, body, feet, and knees is also very necessary from the point of view of health, particularly in children who are running about, and may suffer very frequently from septic places, or "impetigo," as the result of various falls. If seen in time, such septic conditions can be rapidly healed by the use of dilute ammoniated mercury ointment, and by keeping the places covered with a clean dressing. Impetigo can easily spread from one child to another, and therefore the teacher should be on the lookout for it, and have the first place attended to as rapidly as possible.

2. Internal Cleanliness

Personal cleanliness does not consist only in the above-mentioned external care of the body, but it includes also the daily elimination of waste products from the body, and this is a matter which it is difficult for the teacher to supervise. A plea must be entered here for the liberty of the school child to leave the room for this purpose whenever he feels inclined. Cases of abuse of this liberty can be prevented, but the refusal may lead to the setting up of a chronic habit of constipation and ill-health or to loss of control over the excretions.

3. Clothing

Clothing is not entirely within the control of the teacher, but where possible it is a very excellent plan to have some sort of school uniform and to abolish the idea that a large number of garments is essential. It is still quite common to find a child sent to school in winter with ten to twelve layers of clothing on her chest, starting with a sheet of thermogene wool and ranging through vest, combinations, "stays," several petticoat tops, frock, pinafore, and woollen coat. The result is that the child is extremely uncomfortable, sweats profusely, and catches

cold, as the skin loses the power to act, ill temper and depression naturally ensue. A word to the parents, either individually or collectively, is probably the best way to establish a right

round the neck, arm-holes, and legs, e.g. elastic of knickers.

4 It is important to keep legs well covered in the winter, as much heat is lost, particularly

FIG. 1

In Summer · Woollen Vest, Cotton Knickers and Frock, Bodice is Worn on Cooler Days

FIG 2

In Winter · Woollen Combinations, Bodice, Knickers, Frock, and Socks

habit with regard to clothes. The following cardinal points should be emphasized—

1 There should never be more than three layers of clothing in summer or four in winter

2 Undergarments should be of thin wool (or wool and cotton mixed, next to the skin); the frock will be of cotton or wool, according to the time of year.

3 Nothing tight must be worn, particularly

in the open-air schools, by the habit of exposing the bare thighs

5 Shoes are always preferable to boots, as they allow the ankle room to move and develop

6 Hats are not necessary except in times of great heat, and are frequently the cause of vermin persisting in the head It is important to remember this in dealing with verminous children

If the child is to be kept free from cold and infectious diseases of various kinds, including septic places on the skin, the garments must be carefully washed at frequent intervals. This applies particularly to boys' suits, which are often handed down from father to son, and from one brother to another, without any intervening process of cleansing Infectious diseases such as scarlet fever have been proved to be transmitted in this way, and this is where co-operation of the parents can be very usefully obtained One has only to sit with a class of unclean small children for a few hours to realize what

FIG. 3

First Sun-bathing at Kenwood, under the Auspices of the Sunlight League, 1924

an oppressive smell comes from either unwashed bodies or unclean clothes.

4. *Air and Sunlight*

Fresh air is probably as important to the life of a human being as fresh food, and those who work in artificially ventilated schools no doubt suffer more from headache and fatigue than those more fortunate people who work in a schoolroom with open windows.

Ventilation

When the weather permits, i e. except when there is driving rain or fog, the windows should be wide open. It is better to have them open wide than just a little, because the narrower the opening the more quickly does the air enter, and if the draught is very strong the chill air blows straight down on to the children instead of becoming slightly warmed as it does if it enters more slowly through a wider aperture. At some time in the day the classroom must be thoroughly ventilated by leaving both door and windows wide open at the same time, but children should not sit thus exposed to a strong current of air, although in the open-air schools they get accustomed to considerable degrees of exposure, and suffer no ill-effects.

Stuffy rooms are a great cause of headache, bad temper, and general fatigue. The main point to remember is that the air should always be kept a little on the move, so that the skin can act and get rid of the superfluous heat of the body. This is important even in cold weather The air should be warmed up to the temperature of 58° Fahrenheit, in order not to strike too coldly on the delicate linings of the nose and throat. Cool, moving air, which is not too dry, helps to keep the mucous membrane of these passages in good condition, and thus to prevent the all too prevalent cold and nasal catarrh

The open-air schools have pointed the way for all schools of the future, when children will not wait until they are sickly or debilitated to benefit by the very excellent conditions which are now available only in the few schools of this type. The time will surely arrive when the healthy child, not suffering from rickets, bronchitis, or anaemia, nor recovering from infectious disease, will *maintain* his or her health in good condition by staying in the open air for the whole day, instead of being let out from a close classroom for only a few minutes during school hours.

Sun-bathing

The great advantages of sun-bathing are being brought to public notice by the activities of the Sunlight League (Offices, 29 Gordon Square, London), which in 1924 tried the experiment of sending children from schools to have exposures up at Kenwood. This experiment unfortunately broke down, but the London County Council are considering the question of using Kenwood again for this purpose. Facilities for sun-bathing in Hyde Park were given to the public in July 1930

Direct sunlight is the best disinfectant we know, and it is necessary to point out that where

a house is built with a projecting balcony, this keeps the direct sunlight off the rooms. One often finds open-air hospitals and schools so constructed that no direct rays of the sun can ever reach the rooms for this reason.

Children who are being exposed to the sun must be protected from the glare and effect of the heat on the eyes, head, and neck. Wide-brimmed hats should nearly always be worn at

rays, which are so curative, are most active in the early morning.

Where possible, it is very advisable to alternate sun-bathing with resting in the shade, or even with sea or fresh-water bathing. The latter, however, should be practised for only a very short time on end, as swimming or bathing is very exhausting for the child. Five minutes for the first bathe and ten minutes for every

FIG. 4

Happily Acquiring the Habit of Exercise

the seaside; one of the reasons why both grown-ups and children find work out-of-doors very tiring is the effect of the glare from the sun. The good effects of sunlight are many, besides the merely recuperative. The whole working of the body is speeded up, with the result that the digestion is better, the appetite improves, children sleep more easily, and those who are inclined to rickets produce a substance in their blood which cures the disease

Sometimes even in this climate the rays of the midday sun are too powerful, and exposures should be before 11 a m or after 3 p.m. only As a rule, however, it is possible to use the sun all day long, remembering that the ultra-violet

subsequent one is sufficient for all but the very strongest children.

5. *Exercise and Games*

The habit of taking a right amount of regular exercise is an important one to establish, from both the physical and the mental point of view.

The love of communal games, or working together in gangs, comes usually about the age of 7, and lasts throughout school life, and this is the medium through which the team spirit and enthusiasm for the school can be aroused best.

Games in which children of all ages can take part, such as ball games or team races, are very suitable for school playgrounds, but it is well to avoid too long spells of games which involve long periods of standing, such as cricket. All forms of sport are useful in developing the team spirit, and the Junior children can be allowed to do jumping and short races of various kinds, though the excitement attending sports is sometimes too great for the younger ones, with subsequent upset to the health, and ill temper.

Dancing

Dancing in all its forms, as well as games, may be very helpful in the development of character. It is probably even more important than organized games, because if accompanied by music it develops the child's ear and sense of rhythm. Dancing, as Havelock Ellis points out, was one of the earliest arts to be developed, and children as soon as they can walk will begin to do rhythmic movements of their own accord when listening to music.

There are various methods of dancing other than ballet or ballroom dancing, and nearly all of them have this in common, that they are free movements, which produce relaxation of the body muscles, rather than stereotyped rigid movements, which tighten up the muscles, and may produce much more fatigue, incorrect posture, and so forth.

Swedish drill is much too strenuous and rigid for the child of below 10 years of age, but small children will enjoy composing their own dances to any music that is played to them, doing simple movements such as are taught by either the Dalcroze or Margaret Morris methods.

Miss Morris, herself a dancer of no mean repute, has evolved a system of physical movements which are in themselves purely physiological, consisting of the movements of opposite hand and foot, as opposed to fancy or ballet dancing, where the same hand and foot move together. These exercises have been used with great effect in the crippled children's school at Chailey and other places, and are even more useful in the development of the normal child.

Maintaining Spontaneity and Enjoyment

It is important to remember throughout the child's life that things that are done without self-consciousness, such as dancing and all other habits here detailed, are much more beneficial than those which are inculcated from a sense of duty. The mere fact that a child is told to do a particular thing is in many cases enough to instil into his mind a most perverse and deep-rooted dislike for doing it.

Variation in recreation and habit is very important, and while simple exercises modified from Swedish drill may be given one day, it is wise to vary this with either Margaret Morris or Eurhythmic movements on the other days of the week, because children vary in the type of exercise which causes them most pleasure.

The habit of listening to simple music at an early age is valuable in the training of the ear, especially when it is done with dancing and design of group formations, etc.

6. Sleep and Rest

Sleep is as essential as food to the growing child. Not only the amount is significant, but also the kind of sleep, and the conditions under which the child is at rest. Children who come from overcrowded homes, where noises keep them awake at night, require midday sleep in order to make up for what they lose in the night; but the ordinary healthy child should be able to give up his midday rest after the age of three or four, and, in fact often sleeps all the better at night for the change.

Amount of Sleep Needed

It is a great mistake ever to wake a child from his sleep. Individuals differ very widely in the amount they need for the repair of their nervous energy. Each child if brought up in good surroundings will establish his own rhythm. At the age of 3 some children need twelve or fourteen hours at night, and many will continue this habit until they are 10 or 12 years old. After that period they no longer sleep the round of the clock, but are usually content with ten or eleven hours in bed. The habit of early waking

is one which changes in a very interesting fashion. A young baby or little child is always lively and pleasant in the early morning any time after five o'clock, but as children grow older it becomes more difficult for them to get out of bed; they are often hard to rouse, and inclined to sleep on till seven or eight o'clock. Where this is so, it is better to let them sleep if the household can be arranged in this manner, remembering the words of the child, "Why do you send me to bed when I am not sleepy, and make me get up when I am?"

Resting After Meals

It is a good plan for a child to rest for twenty minutes or half an hour after the midday meal, with a book if necessary, or to lie still while a book is read aloud. This is very different from having one to two hours of sleep in the middle of the day, and children should on no account be allowed to rush out to their games directly after their midday meal. Twenty minutes' rest at least allows the processes of digestion to get properly established.

Disturbed Sleep

Whenever the child is losing weight, fretful, irritable, inattentive at work, the first question that the parents, or nurse, or teacher should ask themselves is this: "Does the child get the amount and the kind of sleep which he really requires?" Has he a good hard mattress—a light and airy room? Are the coverings light and warm? Has the child the advantage of sleeping by himself? Does he have to go to bed with cold feet (this being regarded as a very necessary moral discipline by some parents)? Is he disturbed during the night by older persons going to bed, noises in the street, or parasites that irritate his skin, or by that restlessness of childhood for which no one cause may be found?

It is not easy to find answers to these questions in a school, but it is still no uncommon thing to find a small child of 8 or 9 falling asleep at work because the night's rest has been disturbed in one or more of these ways

7. Food

The next question which should occur to the careful observer is that of food: the amount, the quality, and the regularity of meal times. Though the children do not actually take any meals in the average Junior School, they are old enough to be taught to take an interest in their food and its uses. In health training it is important to emphasize the primary value of the *prevention* of disease, and it is far too seldom realized how important a part in this is played by the right diet

A child requires three good meals a day. As much harm is done by over- as by under-feeding; even in very poor homes too much bread and potato is often given whilst the amount of rickets-preventing animal fats (milk, butter, cod-liver oil, etc.) is insufficient.

It is a good plan for the school teacher to compile (with the assistance of the children) a diet sheet showing how meals containing all the essential elements may be prepared in the cheapest way. A great deal of household shopping is done by children, and they are generally pleased to display the practical knowledge of prices which they have gained in a more or less irksome duty. Great care must be taken, however, to prevent comparison with or condemnation of meals served at home. The interest should be centred round the fact that there are different essentials in different types of food, and that, therefore, there is real reason in the statement that certain dishes are "good for you."

Eating between meals is definitely, and with equally good reason, "bad for you," and it should be explained that, while boiled sweets, chocolate, and fruit are excellent if taken as part of a meal, if eaten between meals they spoil both appetite and digestion

8. Conclusion

It is noteworthy that the symptoms of wrong feeding—lassitude, irritability, lack of resistance to disease, bad complexion—may also be the result of internal or external uncleanliness, wrong clothing, insufficient air and sunlight, lack of exercise, or insufficient rest. This illustrates the vital point that systematic habit training in *all* these matters is essential to a healthy body and the resultant cheerful mind.

HEALTH TALKS

As has been said before in this section, the most important thing about health is to be entirely unconscious of it. At the same time, the teacher can interest children in practical hygienic details without telling them that the subject is related to health just as we can explain to them the processes of reproduction without introducing the word sex.

For example, children should learn by analogy from plants the fact that all things grow better in the sun. This can easily be demonstrated by growing green plants in the darkness and in the light, and then showing the difference in colour between the two plants and their general vitality, or a practical demonstration can be made of the effects of feeding on either plants or animals—and here we can introduce a practical lesson about the need for good cold water, and see that the children get plenty of it to drink while they are in the school. (*Warm* water

is much better for the outside of the body, especially for removing dirt.)

It might be well to call these talks by some general term, such as, "How we Live," or "Animal Life," or "Growing Plants," rather than to label them "Health," and below is included a short list of subjects which can be covered in this way with a few appropriate illustrations—

Growth   illustrated by sunlight, water, food, fresh air, plants and animals

Simple talks on reproduction in plants and animals. For example, fertilization of plants, frogs' eggs, tadpoles, and (for children who can keep them) rabbits or cocks and hens

The object of such talks should be to give children knowledge about their health, not about disease, and to interest them in the growth of animals and plants without being too didactic on the comparisons between them and man

BREATHING EXERCISES

It might be supposed that breathing was so automatic a proceeding that we could hardly go wrong in carrying out this function, but any one who has observed even quite small children closely has noticed that they assume a number of bad positions.

From the earliest weeks of life it is very necessary for the child to be free to breathe, but some unwise parents hamper the ribs by tight clothes or heavy things on top of the baby. When the child starts to run about he breathes more deeply, and the exercise enables him to get considerably more air into his lungs. By the time the child is five years old, and goes to school, he is obliged to sit about for the greater part of the day, sometimes on hard and uncomfortable wooden forms; one result of this may be that posture deteriorates and the child's back becomes curved, especially when he is tired.

One of the most disastrous effects of ordinary "gym" is the tightening up of the whole body which may occur. The writer has seen small children assume the most awkward and uncom-

fortable positions It is with a view to avoiding mal-postures that the following suggestions are made with regard to breathing exercises.

Preparations

1. Before doing any kind of breathing, see to it that no child has anything tight round the neck, waist, or legs (tight elastic in knickers, for instance, will cause a check in the circulation, and that will make it more difficult to breathe).

2. When possible have the children in the open air, or the classroom windows widely open

3. Gentle nose blowing will clear the air passages and enable the children to breathe in with the mouth shut This is vital to the proper performance of any breathing exercise.

4 Try to get each child to relax by standing loosely instead of tightened up and "at attention." This will avoid the fixed thorax and strained position which many children assume during drill.

Exercises   Now for the breathing exercises

themselves. The important point to remember is breathing in through the nose, with the mouth shut, and breathing out with mouth open

Miss Margaret Morris has arranged the following simple breathing exercises for children.

of the diaphragm and maintains good posture, besides producing a most valuable auto-massage of the intestines

It is essential that the teacher should hear the air being blown out through the mouth, as

Expiration   Inspiration

By courtesy of

FIG 5

"Blowing Balloons" Exercise

Inspiration

Expiration

Margaret Morris

FIG. 6

Circular Breathing

In all breathing exercises the essentials to teach the children are—

1. To breathe in *always through the nose*, filling first the lower part of the lungs, then the middle, then the top, gradually flairing the ribs and lifting the chest *by filling it with air*.

2 To blow out the air through the mouth (with a soft whistling sound through slightly compressed lips)—*while contracting strongly the lower abdominal wall*.

This abdominal contraction or expiration is of the utmost importance, it assists the ascent

with a big class it is the only way of knowing that the expiration has been fully done.

With the youngest Juniors the first exercise below is best to begin with (it may be omitted for older children).

1. *Blowing Balloons*

Position. Sitting crossed legged on the floor.

Expiration (through the mouth). Cup the hands round the mouth and blow into an imaginary balloon, blowing out all the air possible

Inspiration (through the nose) Stretch up body, back straight, head and chest up, circle arms out to sides to indicate size of balloon.

2. *Circular Breathing*

Position Lying on back on floor, knees drawn up. Place one hand on chest and one on abdomen to feel the circular movement.

Inspiration (through nose) Inflate first abdomen, then ribs, then chest.

Expiration (through mouth). Contracting strongly lower abdominal wall, deflate—first abdomen, then ribs, then chest The movement should be smooth, producing a circular wave-like movement.
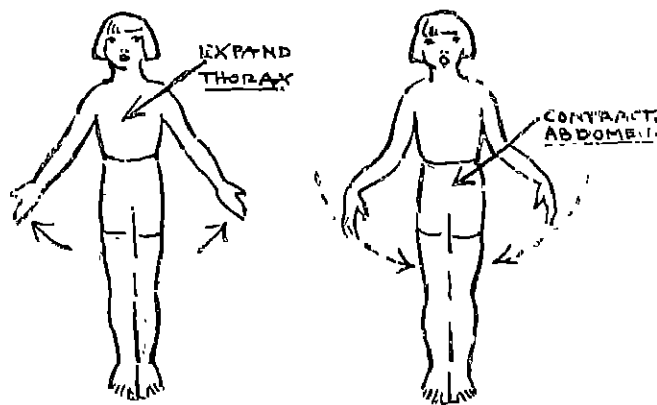
Inspiration

Expiration

By courtesy of

Margaret Morris

FIG 7

Standing Breathing

3. *Standing Breathing*

Position. Standing—feet straight, toes and heels together, body stretched up tall, head up, chin in—*avoid hollowing the back.*

Inspiration (through nose). As in circular breathing but concentrate on the upper thoracic breathing, filling and lifting chest during inspiration.

The arms are stretched out to about 2 ft from the side, palms facing teacher, head stretched up

Expiration (through mouth) Contracting strongly lower abdominal wall during whole of expiration.

Arms turned palms down toward floor, wrist and elbows slightly flexed and relaxed, bring hands to sides with a soft wave-like movement, relax neck, head bending slightly forward.

Time of Exercises

This varies slightly according to age and lung capacity of children—usual time slow four time, taking four beats to breathe in, and four beats to blow out, slow tango music may be used to accompany the exercises.

Repeat each exercise 6 or 8 times, then rest and begin again

Gramophone records with details of exercises specially prepared for use with them may be obtained from the Margaret Morris School of Dancing, 1 Glebe Place, London, S.W.3.

HOW THE BODY IS MADE

Introduction

We must first learn something about the structure of the body, or its *anatomy*, before we find out how it works, or its *physiology ;* the application of this knowledge to everyday life is by the method of *hygiene* or healthy methods of living.

Let us begin with the bony framework or *skeleton.* This is made up of a large number of *bones,* some of them small and fitting closely together, as the bones of the spine; these bones are built to carry weight, more than for fine movements The long bones of the limbs also carry weight, whereas the small bones at wrist and ankle allow of much more movement

A *joint* is the name given to the part where two or more bones meet and move on one another, as at the knee, elbow, wrist, and neck The joints of the spine are apt to become less mobile with age, and care must be taken to move them freely every day. At all these joints the bones are covered by fluid which keeps them moist any drying up of this fluid causes pain, and sometimes leads to changes in the joints called "arthritis."

Bones are moved by the contractions of *muscles,* which are attached to them by *tendons,* a part of the muscle adapted for the purpose of pulling on the bone. If you look at your hand you will see that the tendons are quite

visible, and as you move the fingers you can feel the muscles of the arm contract and then relax

The muscles are controlled by *nerves,* which come to them from the spinal canal, and sometimes from the brain itself To move the body three parts are thus essential . the *nervous system* consisting of brain and spinal cord and nerves, the muscles in every part of the body to which the nerves run, and the bones, which are the supporting framework of the body. The whole of this rather complicated machinery is kept together by the skin, which covers and protects every part of the body . in special parts the skin itself is protected by coverings such as hair and nails

All power to move and breathe is controlled by the brain, which is enclosed in a strong bony case known as the *skull*; the sense organs of sight (eyes), hearing (ears), smell (nose), taste (tongue) are also protected to some degree. (The fifth sense, of touch, is in the skin, especially in the fingers.)

The spinal column contains the spinal cord from which pairs of nerves pass out between the vertebrae (bones composing the spinal column) to various organs and to the limbs. The long bones in arms and legs are somewhat similarly arranged—one in the upper part of each limb and two in the lower; many small bones together form the wrist and ankle—hence the ease

with which such joints can be "sprained" or put out of action.

The arms are attached to the backbone by means of the shoulder blade or scapula behind, and by the clavicle or collar bone in front.

With the hip joints the arrangements are much less mobile. The pelvis is a bony ring supporting the organs in the abdomen, and much less mobility is desirable in this position

So much for the actual bony framework now let us consider where the inside is kept, and what are called the *organs* or *viscera*. These are kept in two parts of the body, the upper, called the *thorax* or *chest*, and the lower, popularly known as the stomach or *abdomen*.

The chest is a bony box containing the heart and lungs, the back of it is made up of the spine, from which come the ribs to form the sides, and these are attached in front to the breast bone or sternum. You can feel all these bones in thin people. You can notice how, when you breathe, the box gets first bigger and then smaller, as the ribs move up and down. Between the chest and abdomen is a thick sheet of muscle called the *diaphragm*, which shuts off the lungs and heart from the other organs, and moves down with every breath taken in.

Inside the abdomen are all the digestive organs, the stomach leading to the small intestine, which in turn leads to the large intestine and external opening or anus.

The liver, about which we hear so much and see very little, is under the right rib, and pours its secretions into the small intestine and duodenum there are also the ducts of the pancreas and the gall bladder.

The waste material of the body is got rid of, partly through the bowel, but also by the kidneys, which are placed one on either side of the backbone : these drain into the bladder, which lies in the pelvis

The abdominal organs are protected in front by a strong wall of muscle, and at the back by the spine and lower ribs.

That is a very brief outline of the anatomy of the human body, which can be much more easily described to children by means of diagrams, which can be obtained from H. K. Lewis & Co, Booksellers, Gower Street, London, W C

It is necessary to have some pictures in your mind of the structure of these organs, before you begin to talk about their functions and physiology.

How the Body Works

It is a strange fact that children are told so little about their own bodies, although they have to commit to memory a great number of facts about dates in history, verbs, and mathematics.

It may be thought that children in the Junior School are too young for this sort of information, but those of you who have been in intimate contact with quite small children know that the average intelligent child asks questions about himself long before the age of 7.

If given simple, direct answers to these elementary questions children will usually be content and will not puzzle over involved matters which are better dealt with at a later stage.

If children are to be taught hygiene by means of games and talks and cleanliness, then it is very necessary that they should know something about how the body is made.

It is not necessary to turn them into prigs, as has been observed already, but you will certainly save future citizens from doctors bills and hospital attendance if you succeed in making them intelligent about ordinary matters in life : not necessarily with the express idea of "keeping fit," but because exercise, and baths, and proper food are much more interesting and are as much part of character training as telling the truth or learning to do things with one another.

The sooner the child knows something about the body the more interest will he, or she, show in the routine of daily life, and such knowledge must be made amusing instead of being regarded as a punishment

The teacher can bring a lot of influence to bear in this direction by the attitude he or she takes toward the nurse and doctor who come to do the routine medical inspections

It should be looked on as a "treat" to go to the doctor or dentist, and never as a punishment It may be difficult to get some of the mothers to take this point of view, as I have known to my cost when confronted with a screaming child whose mother informed me, "I

told him he would come to the doctor if he was not good!"

Now the schools give the teacher a chance to change all that, and as many of the doctors are women they will probably be less alarming to the small child than a man. The nurse certainly can usually be considered as a gentle and motherly person.

Simple hygiene talks will do a great deal to teach the children themselves "first aid" without introspection or morbid interest in their bodies. For example, a child should know that when he falls down and gets a dirty cut on the knee the first thing to do is to get it washed with clean soap and water, then put on iodine and a clean handkerchief.

Similarly the child should be told to drink two or three glasses of cold water a day to keep the inside of the body clean. There should be several jugs or mugs at the school tap, so that this can be done without risk of spreading infection.

A child who chews his food and eats moderately slowly is not so likely to suffer from indigestion as one who bolts or swallows it half eaten.

These, and many other points which will be enumerated, will be of great interest and better carried out if the child is taught a little about the way the body works, just as those people who know the inside of a car are better drivers than those who are acquainted only with the steering wheel.

If it can be arranged it is a good plan to give these talks on how the body works to small groups of children of about the same age, and to allow plenty of time for questions. The writer has found this method useful in giving hygiene talks to larger numbers, and the idea must be to inculcate a little practical hygiene at the same time as the knowledge about function and structure is being given

It is a good thing to begin with the obvious, and of all our functions eating is the one that develops first and survives to the end.

Digestion

Every child knows where his mouth is, and that it contains teeth, some of which come

quite early in life and then, after causing a lot of trouble, fall out when the child is between 6 and 7 years old, only to be replaced by another set.

In children who eat too many sweets and do not get enough butter, milk, or other fat, the teeth may decay and fall out sooner than 6 or 7 years: if the teeth decay the child should go to the dentist and have them taken out, so that the other teeth do not decay later on. First teeth need as much attention as the permanent set.

This is the opportunity to introduce a little homily about brushing the teeth night and morning with a clean brush which belongs to the owner, and is not used by any other member of the family. The brush, too, must be renewed before the bristles begin to come out, or the bristles may cause harm, they have been found in an appendix during an operation!

Children who have been to day nurseries before they come to school will know all about the use of the tooth brush, but many of the others will not, and it makes quite a good game to show them how to brush the teeth up and down and not across, also how to keep the brush clean.

Now teeth are there for a purpose and that is to bite, not other people, but the food that is given. Quite young children can be made to enjoy apples, baked potato skin, bones of various kinds, instead of the universally "pappy" food which some mothers seem inclined to give.

The tongue is a very useful organ, not only for talking—perhaps its least good point—but also because it helps to masticate the food by rolling it into a ball and then putting it in a little lump at the back of the mouth ready to be swallowed.

Quite young children can be taught to show the tongue to the mother, nurse, or teacher, so that she may see if it is furred or if they are constipated: this accustoms them to the idea of opening their mouths without a fuss

It is much more important that the throat should be quite healthy and easily seen than that the back of the neck should be kept clean, because the two glands on each side of the inside of the neck, called the tonsils, are the great gateway for the entrance of germs of disease.

Children will enjoy showing the throat without a horrid spoon or spatula, if they learn to do this while young, and many an unhealthy throat can be prevented from coming to school and spreading infection to others.

Lastly, children must know that the water in the mouth is useful in making the food into a nice ball, and helping to digest it: it should not be wasted on pencils, or in spitting.

They should be taught not to talk with their mouths full, so that this fluid gets all over other people, and the teacher *must* remember that the child with the sore throat is going to spread germs very rapidly by talking.

To sum up, the mouth contains glands, tonsils, teeth, tongue, and fluid (saliva), a very interesting collection, all of them used in the digestion, and cleanliness here is very important in perfecting function and avoiding disease.

We shall come back to the tonsils when we talk about breathing, as they are also concerned in the use of the nose and throat. We can now pass on to the next stage of digestion, which goes on in the stomach.

Every child knows this word, but when they talk of the stomach many people refer to the whole of the abdomen, whereas really the stomach is a distinct organ situated in the middle and slightly to the right just below the diaphragm.

As the stomach cannot be seen it is not necessary to talk at great length on what it does to the food. Just tell the child that food stays in the stomach for about half an hour after it is eaten, and that is why we do not run about violently for at least that time from the beginning of a meal.

The only other point children need to remember, and one that they probably know already, is that if they have anything too tight round the waist, like elastic or a leather belt, the stomach cannot expand: also they should be told not to eat food until they are uncomfortably full, because that means that the stomach is being over distended, and might get too much stretched. For this reason it is a bad plan to eat and drink at the same meal, partly because the water tends to wash down the food instead of the saliva doing so, also because the stomach gets distended and uncomfortable.

The food goes through a number of stages of digestion in first the small and then the large intestine, or bowel. In its passage through these tubes it is acted upon by various secretions which are poured into the bowel from the pancreas, from the liver, and from the wall of the lining membrane itself. The useful part of the food is absorbed or taken up into the blood during the passage through the bowel, and the waste material is excreted or got rid of in the daily motion. This leads us to consider the whole question of excretion—or getting rid of waste material.

Children will understand that they cannot use every part of the food that they take in, and that in the process of working the body machine a good deal of waste matter has to be removed each day, and this is done in the following ways.

Excretion

1. *The bowels* are the means by which the solid residue or indigestible remainder of the food we eat is excreted, and they should act once every day (at least). It is most essential to bodily health that this natural function is kept in good condition. In order to have the bowels acting every day the following rules are necessary—

(*a*) The food taken in must be eaten slowly and well bitten in the mouth, and should include some raw fruit or salads every day

(*b*) Time must be allowed after breakfast for the bowels to act. The meals must be eaten in peace, without nagging or scolding—otherwise the child's nervous mechanism will be upset. Harmful aperients must not be given, such as castor oil, bitter aloes, or syrup of figs, which only lead to a vicious circle of constipation. Brown bread, honey, salad, and fruit are better than medicine but if any be given, one should advise a mild dose of salts or a little cascara. Castor oil is particularly harmful. Water first thing in the morning is good.

2. *The Kidneys.* These organs get rid of the watery part of the waste material and, in order to prevent serious illness to the body, a great deal of water should be drunk every day. Children are naturally very thirsty creatures, and they should be encouraged to drink water freely between meals. The water from the kidneys is

secreted, drop by drop, into the bladder, and then got rid of at regular intervals—which should not be longer than two to three hours in the young child

The popular prejudice against drinking plenty of water is probably due to the fact that London water was formerly very bad, and contaminated with the germs of cholera. Now that a good supply is freely available in most parts of the country, children should be encouraged to drink water : if the supply is not pure, it can be filtered or boiled.

All that the children need to know about the structure of the kidneys is that there are two organs situated on each side of the spine (as may be seen from the pictures in advertisements).

3. *The skin* is another very important means of getting rid of waste products, through the sweat glands or organs of perspiration. Here, again, the children's minds probably need to be free from the idea that there is something secret and "nasty" about the matter. For their size children perspire more freely than adults, and babies often get quite wet in the head.

The skin can get rid of its waste products only if the following are attended to—

(*a*) The skin itself must be kept clean by *daily washing* with soap and water. It is not only for the purpose of looking nice, but also because if dirt is allowed to accumulate the openings or pores of the sweat glands get clogged up. The smell of sweat is unpleasant. The washing of the skin not only cleans the dirt but also acts as valuable massage.

(*b*) The skin acts properly only if a good deal of it is exposed to the *open air*, because although it is a great organ of excretion the skin has another very important function, namely, to *regulate the heat loss of the body*. Every one knows that children who are coddled, "wrapped in cotton-wool," kept unduly indoors, will "catch cold" on the slightest exposure to chill, whereas the child with the open neck and bare legs (in moderation) can face the chilliest day without danger.

(*c*) The *clothing* with which the skin has to be covered should be light, warm, and well washed.

4. Waste products are got rid of by the *lungs* in the form of carbon-dioxide, CO_2, which is the end product of muscular exercise. As the lungs

are so important as a means of excretion we shall now pass on to consider the whole mechanism of breathing, which includes, besides the lungs, the nose and part of the throat.

Breathing

This function is an obvious one like digestion, and children should be made to feel the lungs expand by placing one hand below the collar bone and another on the ribs when doing the exercises already described by Margaret Morris.

Then the teacher can explain to a class how the air, which is invisible but all around them, is taken in at every breath to the lungs, where it comes into contact with small blood vessels or capillaries. Of the air *taken in*, the lungs give up some of the oxygen to the blood, and take *out* carbon dioxide, which is one of the waste materials of the body (Hence there is excretion from the lungs, as well as from other parts of the body.)

It is not easy to explain the chemistry of breathing to young children who do not know the meaning of words, but they can understand the difference between a solid, like ice, a fluid, like water, or a gas, like steam. This comparison will also give them some idea of the effect of heat on various substances, and that there are "gases" in the air. It is easier to tell a child *how* the air enters and leaves the lungs with the help of the plan.

Air passes in through the nose—at least, in normal people, who breathe with their mouths shut Inside the nose are hairs on the lining membrane and a fine bony sieve through which the air is *filtered* (leaving solid particles behind as all of us can tell by blowing the nose on a foggy day) The air is also *warmed* by passing over the lining membrane which contains many blood vessels (hence the ease with which the nose bleeds when it is injured). Thirdly, the air is made *moist* then it passes down the passage between the nose and throat (naso-pharynx). Into this passage opens a small tube from the middle ear: when the passage is blocked by adenoids or a cold, people cannot hear well owing to the fact that air cannot enter this little passage or *Eustachian Tube*

The air passes over the tonsils, where germs

may be absorbed, and then passes down the windpipe (trachea) into the lungs. This brief outline will help to show the children how necessary it is for them to breathe with the mouth shut, it also explains why the nose must be "blown" every morning before breathing exercises are begun : and it explains why children can get bronchitis (or a "cold on the chest") as a result of breathing cold, dirty air directly into the lungs

Circulation

The heart is an organ about which much is written, but it is not seen during life. It is the size of the closed fist in most persons, placed inside the thorax or chest, just to the left of the middle line, and its great function is to act as a pump in sending the blood round the body. The blood is contained in vessels of varying sizes ; those which are the most important and largest in size carry the red, arterial blood which has been re-aerated in the lungs, and are called *arteries*. Other vessels which bring blood from the tissues to the heart are *veins*, and the blood in them is blue while all over the body, in every organ, muscle, bone and nerve, are tiny blood vessels called *capillaries*. It is through these small vessels that the blood in the lungs receives oxygen and gives off carbon dioxide.

The heart muscle is exceedingly strong, as it has to keep on contracting and relaxing throughout life if one is to be kept alive. This beat of the heart is transmitted along the arteries where it can be felt as a "pulse"—usually at the wrist, but also in many other places such as the temple, elbow, or the large blood vessels of the neck.

When an artery is cut the blood comes out in jerks and is of a bright, red colour ; venous blood oozes more slowly and is blue or purple

The heart beats more slowly in sleep and old age—about sixty times a minute, in young children from eighty to ninety times a minute, and in healthy adults about seventy-two beats Every one should know how to take a pulse rate, it is a very good sign of illness or health Children only require to learn that this pump, the heart, is beating all the time, and that fright and fatigue wear it out ; also, excessive amounts of alcohol, tobacco, tea, and other drugs.

The circulation of the blood is quite visible, and can be noticed especially in blushing or pallor. There is another fluid which flows all over the body in tiny channels, known as *lymph*. This cannot be seen because it is pale in colour, but that does not mean it is not important to health. We speak of people being "lymphatic," by which we usually mean that they are dull and lethargic, this is due to the sluggish circulation in their lymph vessels, which have to pass into and away from the *lymphatic glands* The tonsils and adenoids are examples of such glands, but there are many others in various parts of the body In disease they become swollen and act as barriers to prevent the spread of poison all over the body. For example, a septic tooth may cause the glands under the jaw to swell and tuberculosis frequently leads to "enlarged glands" in the neck. It is not desirable or necessary to tell children about ill health —many of them learn of it all too soon—but these "sentinels," such as lymphatic glands, can be explained as a boon and not as a nuisance, just as pain is a blessing in disguise.

We referred above to the way food material is absorbed from the small intestine, this does not all pass directly into the blood, but some of it goes by the lymph vessels into the *lymphatic duct* This long vessel passes up the body to be emptied into a vein in the neck. Hence it may be realized that tight collars may cause indigestion by pressure on the duct leading to congestion in the bowel.

The Nervous System

It is not possible to explain the detailed construction of the nervous mechanism to young children, but they should be told that the brain consists of cells, as does every other part of the body, if the simplest form of cell—an amoeba— can be shown them under the microscope, this may help them to get a picture in their minds of the whole body

The cells in the brain and spinal cord are different from those elsewhere, as they have fine processes coming off from them, in the spinal cord these are prolonged into the nerves which act in two ways—

(*a*) Some nerves—called *motor*—carry messages

from the central nervous system (brain and spinal cord) to the muscles and organs all over the body. When a message travels along the nerves, the muscle contracts and movement of the part results.

(b) Messages also pass from the organs and limbs to the brain along other nerves called *sensory* because they convey impressions of various kinds such as heat or cold, pain or pleasure. Many muscular movements are the result of a "reflex" action—for example, if a child burns his finger a message passes rapidly to the brain, which flashes out another to the muscle, causing the injured part to be taken away at once from the flame, this all happens very quickly, and without conscious knowledge, so that it is called a reflex action. Life contains a large number of such reflex actions, such as coughing when something "has gone the wrong way" (i.e. into the trachea or windpipe, instead of into the gullet), sneezing, etc.

This wonderful system of brain, spinal cord, nerves, and nerve endings enables life to be lived in a very complicated manner, and many more actions can be performed by man than by any of the other animals. The nervous system can be exhausted by over or improper use, just as can the digestive or circulatory systems, the various poisons such as excess of alcohol, tobacco or diseased conditions affect the nerves and brain. All who are in contact with young minds should be particularly careful to see that nothing is done at school which can strain this delicate mechanism. Concentration for too long hours, or when the rest of the body is tired, or hungry, or sick, means that the brain cells are working with a poor blood supply; the results will be an ever increasing lassitude, and ultimate continuous over-fatigue.

Sympathetic System

This is another part of the nervous apparatus which consists of masses of nerve cells placed within the body and sending messages only to blood vessels and the internal organs. Such cell collections are known as *ganglia*, and the ramifications of them are called a *plexus*—the largest is the solar plexus, situated within the abdomen, and controlling—among other things—the tone

of the arterial walls in that region. Hence a blow in the pit of the stomach hits the solar plexus, and causes the person to collapse. These nerves are also intimately connected with the various *ductless glands* situated in different parts of the body, and not to be confused with the lymphatic glands (see above) which have vessels leading from them (glands with ducts are, for example, found in the mouth, producing the saliva).

The secretion of the ductless glands is poured directly into the blood stream, and is largely controlled in amount by the sympathetic nervous system. For example—the supra renal glands (situated above the kidney) pour out secretion when an individual is angry or frightened; this material—called adrenalin—acts on the tissues in a number of ways.

Many other glands are affected by the emotions (through the sympathetic) such as the *thyroid and pituitary glands.*

The effect of glands on temperament is more a matter for the teacher or parent than for the child; all who have young persons under their care must recognize the fact that these important secretions are not always well balanced at various periods of growth—particularly in adolescence—and must take this into account when dealing with difficulties. There is a tendency at the present time for the stress to be laid almost exclusively on the psychological basis of development, without due account being taken of the effect of growth or malnutrition on these various organs. An example which affords proof is seen in the case of the cretin who becomes a normal child, when given thyroid for a period of many years, similarly an inadequate diet starves the vital organs and so leads to a maladjusted individual who requires hygienic as well as psychological treatment and advice.

"'Tis the mind doth make the body rich"—is truer for the adult in full control of his faculties than for the growing child.

The Sense Organs

The power to understand what we see and hear around us is due to the brain ; when any part of that is destroyed—by disease or accident —the sensations may travel up to the brain but

not be recorded, for example, the eye may still be a perfect optical instrument, but it the brain cells connected with it are injured nothing may be seen Where one sense organ is affected the remaining healthy one may do double work.

The *eyes* are so important to our happiness that children must be guarded from any over-strain, such as working in a bad light, particularly in the evenings, and from using books with small print Any case of *squint* should receive early and immediate attention, and the glasses prescribed must be worn; otherwise the squinting eye is put out of action, and the sight in it is ultimately lost.

Dirty, ill-fitting spectacles give the child a poor, distorted view of the world. Light waves falling on the *cornea* or outer covering of the eye are focused by the *lens* to form an inverted image on the *retina* This image is transmitted to the brain, where it is correctly seen (i.e. no longer upside down)

The surface of the eye is kept moist by the tear gland and by blinking, which washes the fluid frequently over the cornea into a small duct at the inner side near the nose. Unhealthy children are apt to get inflammation of the eyelids or "blepharitis," which is often associated with some defect of sight. The "whites" of the eye are a good index to general health, being clear and blue when this is good but blood-shot or grey in illness. Any foreign body in the eye must receive serious attention at once, as the sight can be so easily affected.

The *ears* contain not only the organ of hearing but that of balance as well The outer ear is the visible passage, with its external part designed in other animals to move and so catch the waves of sound (i.e. dog and cat), but protecting the opening, which is frequently blocked in children by wax (cerumen) This must be removed at intervals with a soft towel or the child's hearing will suffer Between the outer and middle ear is a thin, tight membrane or "drum"—when any discharge is present it escapes through a hole in the drum and some degree of deafness ensues.

The middle ear contains three very small and finely adjusted bones which cause vibrations to be set up in the inner ear, where the end nerves of hearing are placed

It will be realized that injury or disease in these regions can do much harm, not only to the hearing but also to the brain itself. After scarlet fever and measles or influenza there is a tendency for the ear to become infected, and the discharge may come out through the opening (an Otitis Media) or pass inward to the *mastoid* process, the bony part behind the external ear. Infection in this region may give rise to need for surgical interference, when the child's hearing is impaired, and may ultimately be lost on the affected side

Messages from the ear reach definite sections of the brain, as is the case with all the sense organs. The interpretation of these sounds is a process peculiar to man, the training of the ear is at present very little developed in our educational system. The different range of sounds and variations of pitch can be shown to children by means of a tuning fork More might be done to encourage a knowledge of, and love for, music among children of all ages, in our large cities the ear is apt to become attuned merely to noise.

Smell and Taste. These senses are so closely related that they can be considered together, the end organ of the sensory nerve of smell is in the nose, and that of the nerve of taste in the tongue. Many foods taste good because they smell nice; hence the loss of taste which frequently follows a heavy cold. The impressions gained by these sense organs are much less acute in man than in certain animals, such as the dog.

Touch is felt from nervous processes in the skin, particularly in the fingers, but also in the feet, where the sense of position is partly maintained (as well as by balance).

Heat and cold are also distinguished by the skin in all parts of the body.

It is not possible to separate what we call the "mind" from the body, but in dealing with children under the age of eleven questions of psychology do not need to be discussed.

Some slight knowledge of their bodily functions is necessary in order to give them an understanding—however imperfect—of the world around them. Nothing needs to be said to instil fear into their minds, but information about healthy living should be helpful in their struggle against disease

THE TEACHING OF MUSIC

"The aim of music teaching as a part of a school curriculum should be rather the cultivation of a taste than the acquirement of a proficiency"—HADOW REPORT

THE average child "loves to sing," and quite early in life readily responds to the appeal of music; this natural liking for music is a sure foundation on which to build The pleasure-giving quality of music must be recognized, and the child's natural liking and quick response preserved and developed, if lasting joy and benefit are to be obtained The above quotation indicates clearly the aim of present-day teaching, and places the subject in a fresh light—"the cultivation of a taste." This change of outlook has been making itself felt during the past twenty years

Time was when school music was robbed of its joy by the abundance of theory and notation; when the greater part of the lesson was devoted to unmusical and uninteresting modulator exercises; when four or five songs, rendered with an almost mechanical accuracy, were regarded as sufficient real music for a whole year's study. The new movement has changed all that; true it is that in their enthusiasm for the "enjoyment of music" some teachers have ignored completely the claims of notation, and have confined their attention to "song singing." A sense of proportion must be observed Give the child a full and varied repertory of beautiful songs, and, therefore, a store of pleasant musical experiences. At the same time notation should receive due attention so that the child has *the*

means *of acquiring music for himself.* See to it that as far as possible the exercises are melodic and rhythmic, and so *train the ear* before attempting to test it—children must hear well if they are to perform well Whilst every effort should be made to develop the child's ability to perform well, it must be remembered that in the main the purpose of music teaching is to make our children intelligent listeners

The Essentials for Successful Work

The foundation of the future music training is laid in our Junior Schools, and the greatest importance should be attached to the teaching of the subject at this early stage in the child's life. Allowing for slight variations here and there, it may be safely assumed that the material (the child) is much the same throughout the country Successful work, therefore, depends on three main factors: the teacher; the syllabus and the time allocated to it, and the equipment

The Teacher

Specialization is a common feature of most schools to-day, and where staffing conditions permit the teaching of music should be entrusted to a specialist member of the staff; the ideal person is one who is both teacher and

musician. In any case the teacher should have some executive skill, and a store of enthusiasm, understanding, and sympathy.

Syllabus and Time

It is impossible to offer anything beyond broad suggestions regarding a syllabus The scope of the work will depend almost entirely on the teacher—the "specialist" will be more ambitious, and will get through more work in the time than his non-specialist colleague In many schools, even to-day, the teaching of music, because of staffing, must be left to the class teacher who has no claims to the title of specialist The observations throughout this section have been written especially for these teachers. The main principles to be observed when planning a scheme are that it shall be comprehensive and progressive. Instruction should be given in all branches—

1. Breathing and voice training.
2. Notation and ear training.
3. Song singing.

The amount of time given to music in the average school is usually two lessons, each of thirty to forty-five minutes, per week. Many teachers use the whole of the time for breathing, voice training, and song singing, and completely ignore the work of notation and ear training. Greater success and a better appreciation of the subject will result from a training in all branches. Whilst music may be conveniently subdivided as above, the subdivisions must not be treated as subjects in themselves—they are parts only, all closely related—and should receive such attention as will contribute to the success of the subject as a whole. It is by no means necessary to deal with each part in every lesson.

Equipment

This should be determined by the syllabus, and should be as generous as possible—in actual practice it is governed by the views of the "Head," who has to provide the general school materials on an "allowance per head" basis. Music is greatly valued in most of our schools,

and enthusiastic teachers will find little difficulty in obtaining as a minimum—

1. A piano of fairly good tone—regularly tuned.
2. Modulator, blackboard specially ruled for staff
3. A variety of songs—in books or in sheet form. Innumerable books dealing with every branch of school music have been published—a list of suitable works is given later

Unfortunately, the average teacher has to deal with many subjects, and cannot spare time to read extensively in any one of them. The following suggestions, the result of experience of actual teaching and inspection of school music, are offered for his guidance

Voice Training

In order to get the greatest pleasure and value from their work, the children must be taught to sing in a "natural," easy manner, without any trace of harshness or strain There are some who state that children's voices need not be trained, but experienced teachers who come in close contact with children appreciate that they do not sing correctly unless carefully taught. In their games children often shout and scream, and in their association with adults they may experience voices which are unmusical and jarring: the result often is that their own singing voices become coarse and forced until they become the opposite of natural, *children must be taught to sing.*

Quality not quantity, purity of tone rather than volume, should be the aim, and soft, sweet singing must be the rule.

Voice training should be started early and continued throughout school life. The exercises need be few in number—they should be *learned by ear*, memorized, and designed to produce a tone which is—

Full and resonating—"full" here refers to quality.

Forward—produced in front.

Carrying or easy travelling even when $p\,p$

These qualities depend on—

(a) Natural, full, and controlled breathing

(b) A proper use of the natural resonating cavities.

(c) The mental concentration and imagination of the child

The last of these is probably the most important.

The Child Voice

Boys' and girls' voices are in no way different, except that possibly boys' voices are more powerful. Regard them as the child's voice, and treat them alike. It is a mistake, too, to look upon the voice as anything but a whole, do not split it into upper, middle, and lower parts, and refer to them as "registers", avoid also unnecessary technical references, for these, like the word "register," serve only to confuse the child, and intensify the faults it is hoped to cure

Breathing

Good tone depends on good breathing. Correct breathing is the first step toward successful vocal work. The "breathe in" should be full and easy, and the "breathe out" steady and controlled To secure an adequate "breathe in" children should be encouraged to concentrate on the base of the chest, to which the intake of air should be directed. As a general rule, during exercises children should breathe in through the nose. During actual singing, however, there is insufficient time for nose breathing, and the air is taken in through the mouth. It is, therefore, advisable to practise mouth breathing occasionally even during the exercises, but not until correct placing of the breath at the base of the chest has been secured

Exercise

Position. Children stand upright and easy,
Head naturally poised.
Hands on base of chest.
Teacher says—
(a) "Through the nose breathe in "
(b) "Through the mouth breathe out."

Points to be Noted. 1. The commands—contrary to those of the physical exercise lesson—must be given slowly. The words "through the nose" or "mouth" are cautionary or preparatory. Children will actually breathe on the words "*In*," "*Out*."

2. Children should not "hold the breath" between (a) and (b)

3. The teacher should accompany his commands with arm movements which suggest to the child filling and emptying the lungs.

4. Children should be so placed that the teacher may see and test individual children.

5. Children should feel expansion at base of the chest

6. Avoid—

(a) Raising the shoulders—this indicates shallow breathing, which is useless for singing and harmful to health.

(b) Sniffing during "breathe in "

(c) Collapse during "breathe out "

As soon as this exercise has been mastered, breathing must be considered and judged in conjunction with *Tone.* Some part of every lesson will be devoted to voice training. Quicker and better results will be obtained if the exercises are practised every day—School Assembly offers a splendid opportunity One or two exercises are a splendid preparation for the morning hymn.

Voice-training Exercises

Throughout voice exercises children should stand upright but without rigidity· stiffness of body will produce a like quality in the voice.

The head should be poised naturally—avoid undue raising or depressing of the chin.

Hands should be clasped lightly in front (*not behind*) at the base of the chest

Exercises 1–7 are designed to produce a Tone, forward and carrying, yet sweet and soft in quality.

1. *Humming on a Single Note*
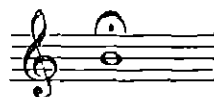
Preparation. Teacher will say: "Prepare to hum," and children will close the mouth lightly and without pressure and with lips protruding. It will help if the order is sung by the teacher thus—

Teacher. Children.

Through the nose   Breathe   in   Hum _____

The teacher will accompany the words "Breathe in" with suitable arm movements, and then "bring in" the class with a gentle but firm attack; a steady, sustained carry on can be suggested by teacher's arms moving horizontally, and a clean finish by a sudden dropping of the arms

Attack   Carry on   Finish
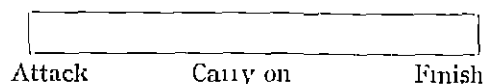
The finish should be a pure M with lips closed, and with no trace of vowel sound During this and subsequent exercises children should concentrate on a point well in front of them, and imagine that they have to "float out" the sound—a gentle one—to that point

Repeat the exercise on all notes within comfortable range.

2 *Humming the Downward Scale.*

Hum - - - - -

The teacher should sing and bring in the class as before in Exercise 1.

Commencing Note. Children should "mentally lift," and place the tone *on* the note; the tone must not be pushed *up to* the note—the chin must not be raised

Descending the Scale Carefully preserve the steps—mentally lower step by step without changing the tone. Guard against depression of the chin about the middle and lower part of the scale; this is certain to alter the tone.

Repeat the exercise in other keys but not below C. The piano need be used only to test pitch

3. *The Downward Scale with a "Lift" Back to Upper Note*

Hum - - - - -

Avoid falling down—preserve the steps. Keep the tone pure and unchanged. A clean "lift" to the octave—no "scooping."

4 *Production of Vowels*

Teacher.   Children.

Breathe in   Moo - - - - - -   oo-M

13—(E 3666)

Children produce M and from it develop OO, carry OO down the scale, lift to octave, and finish with M.

During the singing of OO children should think of the M which is to follow—this helps to secure a forward tone.

Pure Vowel Sounds

Children should practise Exercises 1–4, using all the good singing vowels

Pure vowel sounds will be acquired by imitation, and so teachers should be extremely careful of their "pattern."

The long vowels are—

oo as in *food, moon*
aw ,, ,, *paw, hall*
ay ,, ,, *say, neigh*

oh as in *go*
ah ,, ,, *palm*
ee ,, ,, *see*

The short ones are—

oo as in *book*
u ,, ,, *hut*
o ,, ,, *lot*

i as in *wind*
e ,, ,, *get*
a ,, ,, *cat*

When a good soft tone has been built up on the downward scale—*but not before*—attention should be given to work on the ascending scale.

5. *Descending Scale*

Moo - oh - ah   etc.

The forward character of *oo* must be maintained on the other vowels.
The tone must sing or travel through without any break between the vowels
Take breath at each bar.

6. *Varying the Descending Scale*

As above to Mah-ay-ee.

In the preceding exercises M is to be used first as it definitely brings the tone forward. Other letters L, N, F, etc., should also be used

Having built up a forward and sweet tone, attention must now be given to Flexibility—Range—Colour of tone—phrasing—expression, etc.

7. *Flexibility*

La   la   la   la   la   la

This exercise should be sung on one breath The lower jaw must be free—tongue flat for the *ah*. M, H, N, etc., may be used as initial consonant.

8. *Variations of Flexibility Exercise*

As above—with a distinct "la," "fa," etc., to each note.

9. *Colour.*

Contrast is most necessary if "interesting" singing is to be obtained.

Briskly.

The sun is a shin-ing to wel-come the day The sun is a shin-ing to wel-come the day.

Sing first to "loo" or "la "

Now announce the words and let children sing them without any hint from the teacher.

The phrase will be repeated with a breath between Sing quickly and brightly and with clean cut words.

10. *Another Colour Exercise.*

Slowly.

The sun is sink - ing, slow - ly sink - ing, slow - ly sink - ing in the west.
　　　　　　　　　　*　　　　　　　　*

To be sung slowly and smoothly.

Softer and softer until "west" is a mere whisper. * indicates breath.

The teacher will multiply these exercises, 9 and 10 to give practice in colour as a means to expression, and to contrast loud and soft, quick and slow, gay and sad, jumpy and steady, etc.

Consonants

Singing does not consist of vowel production only—cleanly articulated consonants are of great importance. The initial consonants will present little or no difficulty, whereas many of the final ones will be omitted completely.

When the omission is pointed out, children in their attempt to remedy this fault frequently (1) exaggerate or (2) add a vowel sound after the consonant.

|m   :r .d |t, :—.l, | l,:—|—: ||
guide her to free - doms goa-l

In this ending of the Welsh song—"The

Black Monk" the final L is either not heard at all or it becomes—

goal-eh

The teacher must encourage the children to hold out the *oh* and then give the L, finishing with the tongue still up in the mouth

Trip it up and dow-n.

This is likely to become down—*eh.*

Each with his bon-ny la-ss

becomes—

lasssss-

These examples will serve to draw the attention to final consonants

It must be realized that the child's voice is high rather than low, and it is unwise to call upon children to sing below—

The extension of range is upward, and children at the upper part of the Junior School should be

able to sing [musical notation] easily and with good quality.

A simple exercise for extending the range is—

[musical notation]

1. Hum lightly.   3. Sing to one *la*
2 Sing to one *loo.*

The greatest care must be taken to insist that the tone is lifted to the topmost note.

Suggest to children that they are "lifting" and "carrying" something over a curve-like bridge at the top and then lowering gently down.

Extend the range by raising the exercise a semi-tone every month or so.

Singing Out of Tune

It falls to every teacher to have to deal with this fault. If the fault occurs only at rare intervals it may be attributed to (*a*) faulty ventilation or (*b*) tired children, and a cure speedily affected. Unfortunately singing out of tune (generally flat singing) is frequently caused by wrong methods of teaching. The teacher should overhaul his methods and guard against the following dangers—

1. Wrong method of breathing—incorrect phrasing and broken rhythm.

2. Forced instead of easy forward tone.

3. Children not "hearing" well.

4. Too much "assistance" from pianoforte and lack of mental effort by children.

5. Undue regard to range of voices.

The foregoing exercises, observations, and suggestions are such as will establish music in the Junior School on lines that will prepare the child for rapid and fuller development of the subject in the Senior School, and also in later life.

Ear Training (*Time and Tune*)

Whilst voice training has always received attention in our schools, it is safe to state that in the past ear training has been neglected. Too many people say quite cheerfully, "I have no ear" as if "an ear for music" were wholly a gift. The percentage of children without any sense of "ear" is very small, indeed such children are "rarities." True some are better equipped in this direction than others It must be admitted, however, that an "ear for music" is largely a matter of training and cultivation. In place of the formal and uninteresting "ear-tests" of the past the following exercises are suggested: they are designed to give children an appreciation of time and tune, and some instruction in notation.

Systems of Musical Notation

The controversy over the merits of Staff and Tonic Sol-fa notations is still being waged. It is not proposed to add fuel to the fire—yet the question as to which system is to be used must be faced sooner or later by every teacher.

Experience suggests the sooner the better. Tonic Sol-fa is used in most schools since it enables teachers to secure excellent results in vocal music in a comparatively short time. It is regarded as an easy method because—

1. It invariably appeals to the ear and insists on the "mental effect" of tones and their relation to one another.

2. Its time names admit of being sung.

Music, however, is not limited to vocal music, and Tonic Sol-fa is almost impracticable for instrumental music—here Staff, the older system, must be employed. It is true that music in the average school is mainly vocal, and this suggests the Tonic Sol-fa method. Nevertheless it is hoped to equip children in some degree for a future and larger field of music and, therefore, it seems necessary to give some instruction in Staff. It is a mistake to suppose that Tonic Sol-fa will ever replace the older system—it is doubtful if the founder of T.S.F regarded it as anything beyond a means to vocal work and a possible introduction to Staff. Experience certainly indicates the latter, and suggests that both systems may be taught side by side, and that Staff may be quite easily approached through the Tonic Sol-fa

As speech existed before the written word, so music preceded a musical notation. The order of teaching should therefore be—

First the actual music.

Next the appreciation

Finally the written sign

Let the child first hear a tone, appreciate its "mental effect," and finally learn its written sign in "Tonic" and Staff

The Scale

When the tones of the scale have been established the children will recognize a succession of steps in sound. These steps will be represented on the blackboard thus—
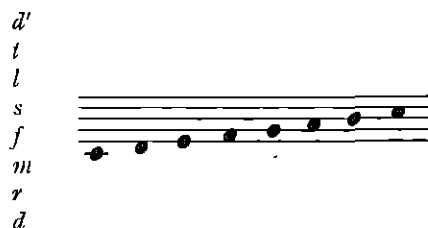
The teacher should next play or sing some well-known tune—"God Save the King," in G will do very well Children will quickly recognize and sing, if required, the Home-note—the Doh.

The teacher should repeat the song in F, A or other key. Children will recognize it as "the same tune but higher (or lower)" as the case may be. The Doh is higher or lower, but despite the pitch of Doh the tune is otherwise unaffected. It is thus clearly shown that Doh may be anywhere. Once this principle is established either line or space on the stave may be regarded as Doh and the notes of the scale follow in stepwise succession thus—

The Doh should always be clearly indicated at the beginning thus—

 or the chord
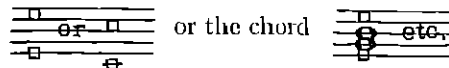
Do not employ key signatures.

The sharpened 4th (fe) ♯ and diminished 7th (la) ♭ will also be taught. Nothing beyond the foregoing—other than practice—is required for the correlation of Tonic Sol-fa and Staff as far as Tune is concerned.

"Time"

The order of teaching will be as in the case of tune—

First: Music

Next: Appreciation (rhythm, time, pulse, etc.).

Finally · The written sign.

The most important point to be aimed for is a recognition of the two kinds of time—

(a) Two in a bar.

(b) Three in a bar.

All music falls into one or other of these "times," and it is impossible to proceed until this principle has been thoroughly grasped. When the children recognize a piece of music as being a Two- or Three-time piece written signs may be given. First will come the bar-lines—in both notations—indicating a strong beat
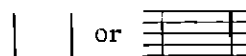
This will be followed by the division of the bar into its beats or pulses

  For Tonic Sol-fa

Names of Notes The Staff names A .   G should not be used. Even when dealing with notes on the stave use the Tonic Sol-fa names—they are easy to sing, and Doh, Me, Soh will app'y to C, E, G, or F, A, C, etc
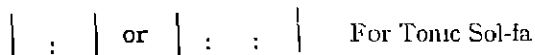
or indicate on the stave the number of beats in a bar thus—

The Tonic Sol-fa name for a pulse should now be applied to both Tonic Sol-fa and Staff notations thus—

| d   : d |
taa   taa
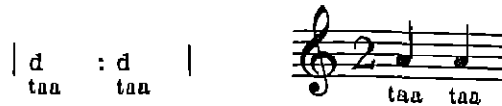
The name taa should be used in Staff whether the ♩ ♪ or 𝅗𝅥 be used as the unit.

It would be wise, however, to begin with the ♩ as the unit.

Recognizing the Notes

Exercise 1   The starting note—the finishing note—the Home-note—*Doh*. Children will sing the descending scale as for voice training.

(*a*) After repeating the passage they will recognize that it "starts high" and "finishes low."

(*b*) Teacher will play or sing all except the last note—children will complete the scale.

(*c*) Teacher plays or sings up the scale—children will supply the last note.

(*d*) Teacher will play or sing in a variety of keys—children to complete with Doh.

(*e*) Teacher gives the name *Doh*, and its quality and then writes Doh (lower) Doh' (higher) on blackboard, and places it in Staff thus—

Doh higher

Doh lower.
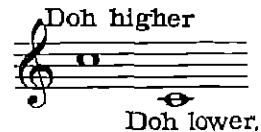
Exercise 2.   To establish *Soh*—

| d ·d |s :—| d :d |s :—| d :d |s :s | s :s |d :— ||

1. Teacher first plays the scale up and down.
2. Teacher next plays above 4 bars.
3. Children sing phrases in imitation
4. After recognition of Doh, children observe another note—a higher one, but not so high as Doh' (higher), and children indicate by clapping hands, nodding head, etc , when it occurs during teacher's playing.
5. Teacher next plays thus—

|| d :d | : | d :d | · | d :d |s :s | : |d :— ||

and children sing missing Soh sound to "loo"   Next they may sing it to Tonic Sol-fa.   Blackboard note—   Soh

Exercise 3. Me.

‖ d :d │s :— │ s :s │d :— ‖ d :m │s :— │ s :m │d :— ‖
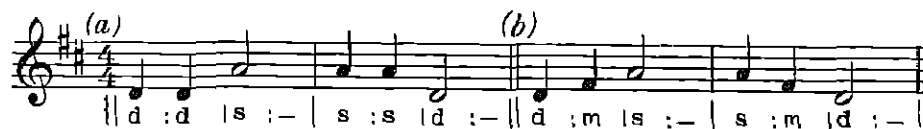
Teacher plays or sings (*a*), children repeat it "loo" and recognize familiar tones and then sing to Tonic Sol-fa names. Teacher plays or sings (*b*), giving a little stress to the Me Next (*a*) and (*b*) are played and children recognize a fresh tone sounded· they indicate by clapping the hands, nodding the head, etc , when it occurs.

They describe it as above Doh but below Soh—somewhere between—a natural step

Children next sing (*b*) to "loo" and then to loo-me-loo

‖ d :—:d │ m :—:m │ d :—:d │ m :—:— │ s :— :s │ m :— ·m │ d :— m │ d :—:— ‖

loo
Sleep my dar- ling, soft- ly sleep While I soothe you gent- ly sleep.

Mental effect—calm, quiet. Blackboard note Me—
Various exercises to establish and test D M. S. will be found on page 1354

Me

Exercise 4. Te, Ray.
Teacher should play and sing short phrases of the tones already known

‖ d' .m :s │ d' :—:— │ d' :—:— ‖ d' :m :s │ d' :—:t │ d' ·—:— ‖

‖ d':—│s .m │ s :—│s :— │ d'—│—:—│ d' ·—│s :m │ s ·—│t :— │ d'—│—:— ‖

Proceed from each (*a*) phrase to its (*b*) phrase introducing "te" Children will speedily recognize that this tone leads to Doh'. Children expect something when singing "te," and feel satisfied when they reach and sing Doh'
The piercing, expecting, unsatisfied effect of "te" may be established thus—

‖ d :d │m ·m │ s :s │t :— │ d' .—│s ·m │ d' .—│—:— ‖

Teacher will play or sing the first two bars stopping at the pause. Children will quickly decide that the music does not finish—something is expected—that something is in the answer of the last bar.

Blackboard note—

te
piercing

Ray.

(a) ... *(b)* ...

d :—:m | s :—:m | s :—:— | m :—:— ‖ d :—:m | s :—:m | s :—.— | r :—:— ‖

Children to sing phrase (a) to "loo" after teacher's pattern. Tonic Sol-fa names should now be sung. It should be pointed out that though the last note is not Doh it does not sound in any way incomplete, though a Doh ending sounds more final—teacher should play both

Me suggests rest, ease
Doh suggests finality.

Let children sing the original (a) phrase two or three times to Tonic Sol-fa names. Now play (b) phrase while children listen. They discover a different last note. Let them sing the altered phrase to "loo," and give them freedom to go on as they wish—they will doubtless sing Doh. The new note is Ray which leans also expecting something.

Blackboard note—

ray
leaning
expecting

Exercise 5. Fah and Lah.

These notes complete the scale—they are extremely interesting but rather difficult.

The Fah is best introduced in close association with its near relative Me, for which it has a great fondness and leaning.

d r m s (f) m ‖ d r m (f) s m ‖ d m r m s (f) m ‖

Children sing phrases (omitting "f") to "loo" after teacher's pattern. Teacher next sings complete phrase—children recognize the fresh sound and—

m m (f) m ‖ s s (f) m ‖ s m (f) m ‖

Children sing m m (pause) m. Teacher sings m m f m
    „   „ s s (pause) m   „   „ s s f m.
    „   „ s m (pause) m   „   „ s m f m

In each case teacher will call "f," "loo." Children next sing phrases including "fah" to "loo"—they quickly recognize a new *tone*, which takes them to Me. Next sing "fah" instead of "loo."

d .d :m .m :s .s | d':—.m .m | f :—:— | m .—:—‖

Teacher, and afterwards children, should sing the above phrases with full pauses where marked when the "mental effect" of *Fah* will be appreciated.
Blackboard note—

Lah.

Play the following groups of 4 notes—

s₁ | d t₁ d ‖ s₁ | d t₁ l₁ ‖

Children will quickly recognize a difference between the phrases. Let children sing both phrases to "loo" and they will appreciate that the second phrase is not so strong as the first.

Welsh Air.

{.m | l .m :r .d | r .f :m .r | d :t₁.,l₁| l₁ :—.‖

The above phrase played or sung illustrates the sad, weeping quality of *Lah.*
Blackboard note—

Fe and *Ta* The children will have sung both tones—quite unconsciously perhaps—when learning some of their songs. In the third year of the course it will be safe to introduce them in the notation work and ear training.
The teacher will sing to "loo," or play on the pianoforte the following short phrases—

{d | m ·s :f | s :—:—‖ m | l :s :f | s :—:—‖ d' | l :m :f | s :—:—‖
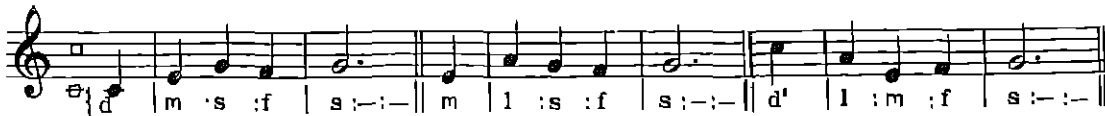
1 Children sing each phrase to "loo," after teacher's pattern.
2 Phrases written on blackboard; children sing them to Tonic Sol-fa names.
3. Teacher announces that he will sing the first phrase to "loo" Does so, but substitutes "fe" for "fah." Children quite appreciate the difference and state that a new sound has been introduced. This sound is described as "higher than fah," or "nearly up to Soh"
4. "Fe" is next given as its name, and the sound is next approached from "fah," thus—

|m · f fe | s — —‖

5 It should now be pointed out that "fe" is midway between "fah" and "soh," and that it is obtained by raising or sharpening the "fah"
6 Place the sign " Fe " on the Tonic Sol-fa Modulator thus—

D'
t
l
s
   fe
f

On examination of the staff modulator it is realized that there is no place for a fresh sound between "fah" and "soh." It must, therefore, be explained that the sign ♯ placed before "fah" raises it to "fe," thus—

{ d | m :s :f | s :—:—‖ d | m :s :fe | s :—:—‖

Children will easily sing the following phrases from songs—

{ .l .t | d' :m :fe | s :— ‖ :d | m :—.r | m :fe | s :—| s ‖ :m | r :s | s :fe | s :—‖
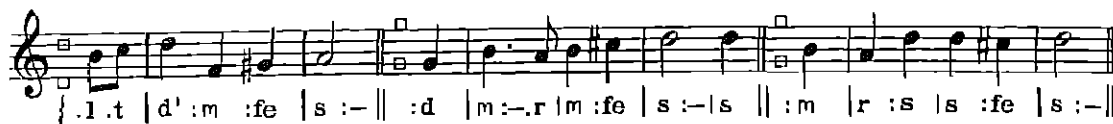
Ta.

This should be taught in much the same way as "fe."

{ d' :t | l | :t | d' :— ‖ d :ta | l | :t | d' :— ‖

1. Children sing after teacher's pattern
2. Recognize a fresh sound—lower than "te "
3 It is "te" flattened Called "ta," and written thus in staff—

Special Note on Staff Notation

No key signatures are to be employed   The tonic (Doh) is to be indicated thus at the beginning of the exercise—

according to the Key
to be used

The only semi-tones to be dealt with are fe and ta, which will be indicated where necessary by the appropriate ♯   or ♭ sign. The natural sign ♮ must also be taught.

Further exercises to establish and test individual notes—

DOH SOH
Me

1
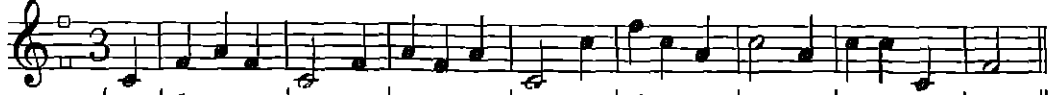
‖ d :m | m :m | s :m | m :— | s :m | s :m | m :m | d :— ‖

2

‖ d :m :s | m :m :s | m :m :d | m :—:— | s :m :s | d' :s :m | s :m :d | d :—:— ‖

3 {|:s₁ |d :d :m |d :d :m |s :s :m |s :—:s |d':s :m |s :m :d |m :m :s |d :—:—||

4 {|| d :m |m :s |s :m |m :—|s :m |m :s |m :d |d :—||

5 {|:s₁ |d :m :d |s₁:—.d |m :d :m |s₁:—:s |d' s :m |s :—.m |s :s :s₁ |d :—||

6 RAY Te
   {|:s₁ |d :d :d |r :—:r |m :d :m |r :—:m |s :s :m |r :—:r |m :d :r |r :—||
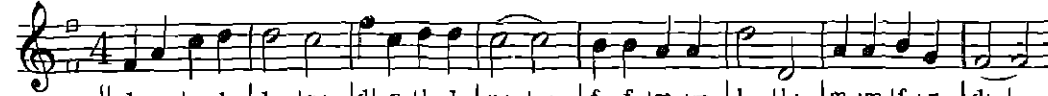
7 {|| d :—m .r |t₁:—|d :—|s :m |m :s |r :—:—|m :—:s :m |t₁:—|d':—|s :m |s :t₁ |r :—|d :—||

8 {|| d :d |r :m |r :—:—d |m :m |s :d' |t :—:—:t |d':r'|d' t |d':—:s |m :m |s :t |d':—:—:—||

9 {|:s |d' .s d' |t — t |d':s .m |r :—:r |m :s :d' |t :—:t |d':s :t |d':—||

10 FAH LAH
   {|:s₁ |m :r :m |f :—.m |r .r :f |m :—:m |s :s :m |f :—.m |f :m .r |d :—||

11 {|| d .m :s |l :—:—|d' :t :s |l .—:—|d':s :m |l :—:s |l s :m |d.—:—||

12 {|| d :m |s :l |l .—:s :—|d'.s |l .l |s :—:—:—|f .f |m :m |l .—:l₁:—|m :m |f :r |d :—:—:—||

13

{|d :m |s :s | fe.—|s .—|d' :l |s .fe | s :—|d :—||

14

{|| d :m :s |l :—:s | fe —:— | s :—:— | l :s :f |m :—: fe | s :—.—| d :—:—||

15

{|| d :r :m | s :—:m |l :s :fe | s :—.—|d':t :l |s :—:m | f :m :r | d —:—||

16

{|| d :m |s .d' | t:—|d':—| d' :ta|l : t |s .—|m :—|m :m |d' :ta | l :—|d':—| t :l |s :m |r:—|d:—||

Appreciation of Time

Children readily respond to the stimulus of music, and in the Kindergarten classes they will undoubtedly have ample opportunity to express their enjoyment of music in a perfectly free manner. They will have moved about—marching, skipping, running, jumping, etc.—in response to the "call" of the music. After such preparatory training they should be ready for a somewhat more definite appreciation of time. It must be remembered, however, that the spirit of play should be preserved throughout the following exercises.

The music of simple National Songs will serve for demonstrating rhythm. Occasionally it may be necessary to make slight alterations from the original in order to demonstrate a particular point. In connection with the following exercises it is felt that an indication of the kind of music to be used will be sufficient.

The strong beat in music

Exercise 1. Play "The Men of Harlech" with strict regard for rhythm.

(*a*) Children should march or step to the music.
(*b*) Clap or tap to the music giving a "loud" or "soft" tap as they feel the music requires.
(*c*) Children will indicate by a clap the strong beat only.

Exercise 2. Play any ¾ piece.

"POLLY OLIVER."

(*a*) Children clap as they wish.

(*b*) Children make marked difference in the clapping to suit the music.

(*c*) Children clap only for the strong beat

Exercise 3. Play any ⁴₄ piece.

"EARLY ONE MORNING."

Proceed as in Exercises 1 and 2, and then children clap to indicate only the strong beat

Exercise 4. Play a ⁶₈ piece.

"BEGONE, DULL CARE."

Again children clap for strong beat only The foregoing examples—others may be added—will serve to demonstrate the strong beat and its regular recurrence,

Teacher should now represent it on the blackboard by a line thus—

Strong Strong Strong   Strong Strong

Exercise 5. The pulse—2- and 3-pulse music. Now repeat the music of "Early one Morning," and let children clap or tap as they feel the music demands They will recognize that the music calls for a regular sequence of strong weak, strong weak, etc.

Now play "Men of Harlech," which for all practical purposes also requires strong: weak strong weak: clapping. These pieces may be described as—

"*Strong weak music*" or "*Two-beat music.*"

If "Polly Oliver," or other ³₄ music is treated in the same way, children will recognize "*Strong weak weak music*" or "*Three-beat music.*"

A large number of examples should be given to demonstrate that music is either two- or three-beat music

Children should be encouraged to beat time during the playing of music. The strong beat should always be expressed by a downward arm movement.

In the case of two-beat music the arm movements will be "down," "up," etc., to coincide with the "strong," "weak" beats, and for three-beat music "down," "across," "up," thus—
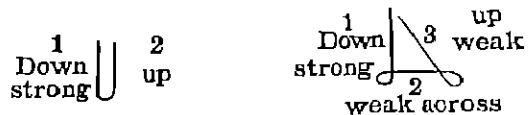
Children should be encouraged to beat time with a free, easy, movement—certainly the rigid

angular motion must be avoided.

Beat No. 2 in three-pulse measure should be given to the right, i.e. to the right of the one actually beating time. It is advisable for teachers to note this small but important point, otherwise they will frequently hide their faces from the class.

The previous exercise, with clapping and time beating, will give a clear idea of Pulse, and help children to appreciate the quality of movement and rhythm The writing of time may now be considered.

(*a*) Children may tap or beat time as they sing.

(*b*) "Two-beat music" is recognized, and children may now sing "one," "two," "one," "two," instead of "la."

The notes should now be written on the blackboard and an upright line (|) placed to indicate strong, and dots (·) to indicate weak beats

Exercise 6. It must now be explained that though an upright line also indicates the strong beat in Staff, no dots (:) are used to show the weak beats Children will appreciate that both notes in any "bar" or "measure" of this exercise are equal in duration of sound—each note is a whole "pulse." A pulse in Staff is represented by ♩—a crotchet—a black note with a stem. The scale will, therefore, be shown in staff thus—

It should be explained that the position of the stem—up or down—is merely a matter of convenience.

The time-name "Taa" should now be given, and children should sing the scale to this time-name while teacher points to the Staff notes.

Repeat the exercise singing each note of the scale three times, and so master the "pulse," one beat, crotchet, "taa" in 2- and 3-pulse measure.

Exercise 7. Use the scale as in Exercise 6 again

This time ask the children to sing their notes and listen to the piano accompaniment at the same time.

On being questioned the children will readily state, "The piano plays only one note—say Doh—while we sing two notes," or "one long note on the piano equals two of ours." In this way children will appreciate a relation in the matter of duration. It may now be shown that the "piano notes" are written thus—
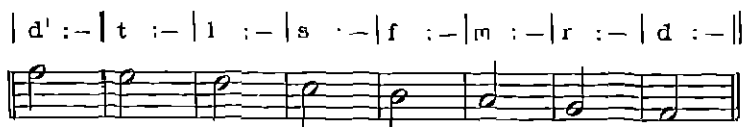
In Tonic Sol-fa we have |d :, one note, and :—| showing that the note is to be continued or "held on" for another beat. This continuation is shown in Staff by an entirely new shape ⌐ or ♩. This new time shape is called a "minim"—a 2-pulse note, and its time name is "Taa-aa." Children should now use "Taa-aa," and sing the scale—

etc

Use the scale again, but this time let the children sing each note three times—the piano

will play ♩. (dotted minim) for each bar. In this way it will be appreciated that the piano note is 3 pulses. Teacher will now explain that ♩ (minim), the 2-pulse note, is used, and that a dot (.) is placed after it to make it equal to three pulses. The dot (.) increases a note by half, and so ♩. is a minim (2 beats) plus half its own duration, thus equalling 3 beats. The time name is "Taa-aa-aa." Children should now be given practice (tapping out the rhythm—singing, etc.), in 2- and 3-pulse music containing notes of 1, 2 or 3 pulse duration.

Teachers should make up exercises on the lines of the following—

Half-pulse Sound

Play the well-known song—

"EARLY ONE MORNING"

Let children tap the rhythm—they will call it two-beat, or possibly four-beat music. Both answers should be accepted and the relation explained. Children should listen carefully to the music and tap or clap in response to the rhythm. It will be found that some will give a clap for every pulse, whereas others will give a clap for every note. By directing the children's observation, and by suitable questions, the teacher should obtain the information that two short notes occur in most of the pulses. These notes are equal and together make a pulse—each is a half-pulse and the two are called "Taa-tai." The half-pause note in Tonic Sol-fa is written |d : d.d|, the dot ( ) divides the pulse into two equal parts. In Staff the half-pulse is shown by yet another new shape—a black note with stem and tail thus: ♪ which is called a *quaver*. Children should see that—

2 quavers (½ pulses) = 1 crotchet (1 pulse).

2 crotchets (1 pulse sound) = 1 minim (2 pulse sounds).

From

|d :d .d| (♩ ♪ ♪)
taa taa-tai

should be developed |d :— .d | ♩. ♪
Taa-aa-tai

Here the dot ( ) increases the crotchet by half its own duration.

Exercises employing—

♩ pulse, ♩. 1½ pulses, ♪ half-pulse.

After practice in $\frac{2}{4}$, $\frac{3}{4}$, and $\frac{4}{4}$ music the children should be ready for work in $\frac{6}{8}$ time.
The following well-known song should be played to the children.

"THE HAPPY CLOWN"

On being questioned the children will describe the music as two-beat music.
"Early one Morning" should now be played. Children will declare this to be two-beat music
The teacher should now ask if children feel any difference in the rhythm of these examples
It is almost certain that children will declare the $\frac{6}{8}$ music "The Happy Clown" as "much more
swinging" On being invited to move to the music children will march to "Early One Morn-
ing," but will use a swinging or tripping step to "The Happy Clown." If asked to clap and

count to the ⁶⁄₈ music children will invariably clap on the stressed beats only, but will endeavour to count on all the pulses. Further, examples of ⁶⁄₈ time should be played so that the children may appreciate that because of the swing of this kind of music the pulses seem to fall quite naturally into groups of three. The group of three notes should be regarded as a unit and the Tonic

Sol-fa method of writing explained, ⁶⁄₈ time is written | d :d ·d |d :d :d | and sung as

| d ₁d ₁d ·d ₁d ₁d |

In Staff the unit or beat note is a dotted one, and ⁶⁄₈ time is usually counted as two dotted crotchets to the bar thus—

From this it will be seen that the bar may be made up of six notes, each a quaver. There must be no confusion between ¾ and ⁶⁄₈ The former means three crotchets in a bar, but ⁶⁄₈ is not the same thing expressed in quavers There is a great difference between

and
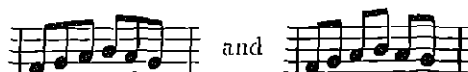
Exercises in ⁶⁄₈ time from the *National Song Book.*

Begone Dull Care

Drink to me

A Hunting we will go

Amid the new-mown hay

The Campbells are coming

Hunting the hare

Good Christian Men

Time

Summary of Time Values. The following Notes, Rests, and Signatures should be known—

Note and corresponding *Rest*	*Note.* and corresponding *Rest*
o semibreve — (under 4th line)	♩ minim — (on 3rd line)
♩ crotchet ♩ or ♩	♪ quaver 𝄾 (like figure 7)

Semibreve   taa-aa-aa-aa.
minim   taa-aa taa-aa.
crotchet   taa taa taa taa.
quaver   taatai taatai taatai taatai

4/4 | ♩ ♩ ♩ ♩ | 4 beats in a bar
    | d :d ·|d :d | (crotchet)

2/4 | ♩ ♩ | 2 beats in a bar
    | d :d |

3/4 | ♩ ♩ ♩ | 3 beats in a bar.
    | d ·d :d |

6/8 | ♪ ♪ ♪ ♪ ♪ ♪ || 2 beats in a bar.
    | d :d :d |d ·d :d |
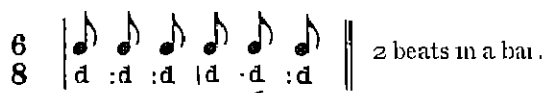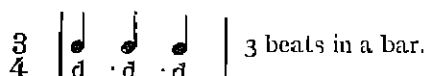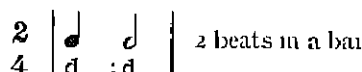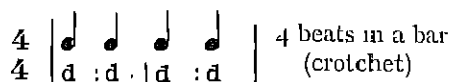
The value of the dot ( )

♩. $1\frac{1}{2}$ crotchets or 3 quavers.   ♪. $1\frac{1}{2}$ quavers.   ♩ $1\frac{1}{2}$ minims or 3 crotchets, etc.

Eye Training

Whilst ear training is the constant aim of all music teaching, due attention must be given to eye training—the association of symbols and sounds—in other words the use of the Modulator and the practice of sight singing. These two branches are thought to be uninteresting and difficult, and in consequence are frequently ignored They can be made full of interest, and will contribute to successful reading.

The Modulator. The Modulator contains the basic principles of the Tonic Sol-fa system, and, properly used, offers the best means of cultivating a "sense of tone." Children should be trained in reading from the modulator as early as possible, indeed as soon as children appreciate the mental effect of a note they should know its Tonic Sol-fa name and its place on the modulator It will thus be seen that the modulator must be built up step by step as the sounds of the scale are established. Since it is hoped to teach both notations side by side two modulators will be necessary In the early stages of Staff work, draw the lines of the stave 2 in. or 3 in. apart The development of the modulator will be as opposite.
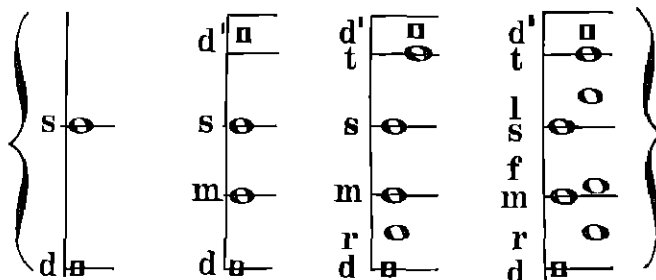
Coloured Modulator. Colour makes a very strong appeal to young children, and during the first year at least it is helpful to associate a colour with a sound, thus—

The bold, solid tones D, M, S, D' in Black.

The rousing, expectant tones r, t, fe in Red.

The sad, mournful tones l, f, ta in Blue.

Use of the Modulator. It is not proposed to give a list of modulator exercises—the best exercises are those made by the teachers themselves to demonstrate special points. The following sugges-tions, however, are offered for the consideration of teachers.

1. Each exercise should have a definite object—

(*a*) To enable children to grasp the mental effect of a special note.

(*b*) To "fix," and give practice in an interval.

(*c*) To establish the position and relation of the notes of a chord.

(*d*) To teach a new song.

2. Make exercises rhythmic and melodic. It is extremely difficult to guard against monotony in the very early stages, but later when the whole of the scale is available for use there is no excuse for aimless and unmusical wanderings which are sometimes given as modulator exercises. Phrases from the classics, national songs, and hymn tunes make pleasant exercises, and are productive of real good There is nothing better than a well-known air—the association between sound and sign is here partly established.

Teaching Points

Use the modulator to fix permanently in the minds of the children the mental effect of the notes. When teaching intervals bear in mind the value of *simple approach, frequent repetition,* and the effect of *pause.*

d r m d m d m m f s m s m s

|| d :r |m :d | m :d |m :⌢|m :r |d :m | d :m |d :⌢||

{| d :r |m :f | s :m |s :—|m :s |f :m | s :m |d :—||

{|m :r :d |m :—:f | s :—:m |s :—:—|s :f :m |s :—:m | s :—:m | d :—:—||

Probably the most difficult interval is the Fourth—be specially careful to approach this stepwise at first thus—

Upwards: drmf d–f; rmfs r–s.

Downwards d'tls d'–s ; tlsf t–f, etc

Later the direct approach d–fm m–ls.

Importance of Doh. The importance of Doh cannot be over-emphasized. Children should be taught to hold fast to Doh, and should be able to return to it from any note in the scale.

Chords Introduce the notes of all chords in all positions thus—

fld' d'lf str' t₁s

The Doh, Soh, and Fah chords are all major, and are built up of the same intervals. Because of this common quality undue stress on either the Soh or Fah chord will destroy the effect of the original key, and allow the chord to become the Doh chord of a fresh key. This danger can be obviated by a generous use of Fah in the case of the Soh chord, and Te in connection with the Fah chord.

Fe and Ta. The above is also true of the notes Fe and Ta. A useful alternative to learning a tune from the modulator is to invite children to supply the Tonic Sol-fa names to a simple tune which they know.

The foregoing remarks apply equally to the Tonic Sol-fa or the Staff modulator.

Special Note. Tonic Sol-fa only.

Horizontal Modulator. After children have had practice on the ordinary vertical modulator they should be given exercises on the horizontal modulator.

The notes are arranged thus, d r m f₁ l t d'

Work on a modulator of this kind calls for concentration on the part of the children, since there is no rise or fall on the modulator to suggest a corresponding rise or fall in the actual melody Exercises on this type of modulator are an excellent introduction to Sight Singing.

Sight Singing

This is probably the most difficult part of the music-lesson. It is, however, a most valuable branch in that it calls for effort on the part of the children, and for this reason sight singing should be practised throughout the school. This does not mean that an undue part of the lesson should be devoted to sight reading—five minutes in a half-hour lesson is sufficient.

Suitable Exercises

It is not proposed to draw up a list of actual exercises, nevertheless it is felt that a few words on the main principles, together with a suggestion as to the kind of exercise will not be out of place. The teacher's main task will be to awaken and maintain an interest in the subject —this can only be done as long as children feel they are dealing with actual music. Exercises which deal with "time" only, or which are made up of a string of notes quite unrelated are certain to be dull and uninteresting, and calculated to be productive of harm rather than good Even with the lower classes as soon as the completion of the scale has been achieved there is no excuse for exercises which are not definitely melodious and rhythmic Teachers should make up their own exercises to illustrate special points. This does not mean that teachers have suddenly to become composers—far from it—such exercises are ready to hand, in the teacher's own knowledge and repertory. All that is required is that teachers shall select with care and with due regard to the point to be illustrated. When faced with such exercises, the children will be quick to realize that their attempts, despite mistakes, introduce them to actual music. The joy of "getting there" will inspire the children to greater effort

The following phrases from well-known songs, etc., suggest the type of exercise.

Exercise 1. Two-pulse music introducing ♩ 1-pulse note

Baa baa black sheep

{|d :d |s :s |l :l |s :—| f :f |m :m |r :r |d :—||
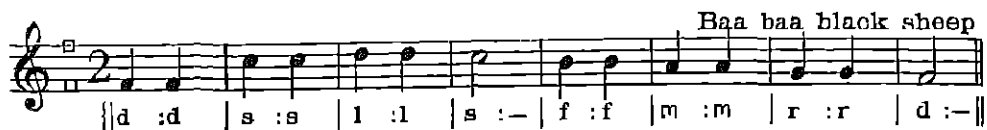
Exercise 2. Three-pulse music introducing ♩ 1-pulse note.

The Ash Grove

|: s₁ |d :m :s |m :d .d |r .f :r |t₁ :s₁ :s₁ |d :m :d |l₁ :f₁ :l₁ |s₁ :d :t₁ |d :—||

Exercise 3. Four-pulse music, illustrating the rhythm ♪ ♪ ♩ ♩ ♩ , half-pulse note on weak beat of bar.

John Peel

|:m .m |s .s |m :m .m |s :s |m :m .m |f :f |r .r .r |f :f |r :r .r ||

Exercise 4. Introducing ♪ , half-pulse notes, also notes of the Doh chord and a complete descending scale

Early One Morning

{|d .m :s .d' |t .l :s .f |m .r :d .t₁ |d :—||

Exercise 5. The dotted note ♩ . 1½ beats in four-pulse measure.

All Through the Night

{|d :—.t₁ |l₁ :d |r :—d |t₁ :s₁ |l₁ :— |t₁ :—.t₁ |d :—|—: ||

Exercise 6. The interval d–f (Fourth). Also fe.

Farewell Manchester.

{|m :r |d .f :m |r .s :s .fe |s :— ||

Exercise 7. The notes of the Soh chord. Also fa.

Polly Oliver.

Exercise 8 Notes of the Fah chord.

Rose among the Heather (Schubert)
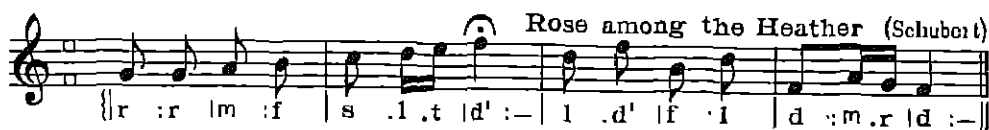
Exercise 9. The octave

Who is Sylvia (Schubert)

Exercise 10. The dotted note ♩. in ⁶⁄₄ time. The beat covering a group thus—

Begone Dull Care

etc.

The foregoing examples will serve to show that simple phrases from actual music are easily found to illustrate any point to be taught

Sight Reading

When children are attempting a piece of music at sight, teacher should endeavour to secure that children—

1. Recognize and preserve the rhythm.
2. "Keep going" in spite of all mistakes.

Of these the first is the more important, for little progress will be made unless children feel and keep the swing of the music. Before attempt- ing to sing the music children should be asked a few questions about the number of beats in the bar, little peculiarities of time or tune, etc., and then the exercise should be faced in the spirit of adventure—to discover the melody, etc. If the work is being done from the blackboard, pointing by the teacher will help: if from books then the teacher can help the children by tapping the strong beats. In any case *all must be together.* If wrong notes are sung or even if notes are omitted altogether it will not matter in the first attempts provided the children keep the swing and general rough shape of the music. The details of the music can be "filled in" in the later attempts.

Supposing the music to be a piece in ⁶⁄₈ time, say—

BEGONE, DULL CARE!

Rather quick.   *17th Century*

1. Be - gone! dull care! — I pri-thee be - gone from me! — Be - gone! dull
2. Too much care — will make a young man turn grey — And too much

Doh is G.
{ :s₁ | d :-:-|r :-:, | m :-:-|-:-:f | s :l :s |f :m :f | m :- -|-:-:s₁ | d .-:-|r :-:- |

care, you and I — shall nev-er a - gree — Long time hast thou been
care — will turn an old man to clay — My wife shall dance and
{| m ·-:- |-:-:f | m :f :m |r .d :r | d :-:-|-:-:m f | s :-:s |s :-:m |

The first thing children should note is that the music is two-beat music, a strong and a weak beat in each bar, each beat covering a group of three notes ♪ ♪ ♪. It should now be pointed out that the main notes are those underlined, and stress should be laid on the importance of *all being together* on these notes—mistakes, omission of notes, etc, must not interfere to put the class off the swing of the music. These points should be put to the children in such a way as will encourage them to "have a shot" at the work, and the children themselves will be surprised and pleased at the success this method ensures. In the later attempts children will find that the swing of the music helps them to fit in the details and thus it will be realized that sight singing is something of real interest. This method gives the children a sense of the music as a whole before insisting on the filling in of details.

Harmony

Part singing will doubtless be undertaken in the fourth, or possibly third, year of the course when unison singing with good tone is safely established This does not mean that *work* in harmony should be left exclusively to the third and fourth year of the course. On the contrary, much in the way of preparation can and should be done in the first year. Quite young children should be able to distinguish between melody—an arrangement of single sounds—and harmony —a grouping or combination of sounds. One finger playing on the piano as opposed to playing with both hands will serve as a broad classification of melody and harmony with first year children Very simple music—Nursery Rhymes and National Songs—will serve to demonstrate melody and harmony The teacher should arrange the pianoforte so that children are unable to see the keyboard and then play the melody or complete score as required. The children should listen and indicate which is being played. In this way the teaching takes the form of a game calling for the active participation of the children. The teacher plays something whilst the children listen, discover what that something is—melody or harmony—and indicate when it occurs For children in the upper part of the Junior School the work may be developed considerably. The singing of suitable part-songs will be introduced and it can be demonstrated that these employ two main forms of harmony: contrapuntal and chordal—the former calling for skill in holding a part, the latter in the blending of parts

In the following example the teacher should play (1) The melody only. (2) The full score (3) Melody and harmony, alternately, phrase by phrase.

It will be found that though children like the melody or tune, they will prefer the full score arrangement because it is fuller and richer

This exercise should be repeated with a variety of music. As soon as the children are able to recognize melody and harmony the next step should be to demonstrate a relation between certain sounds. The children will appreciate quickly that some sounds played in combination on the piano "go well" together; they seem to be related in some way, and unite to produce an effect which is pleasing: other combinations do not go well together, but produce an effect which the children describe as a noise These effects—pleasing or otherwise—the teacher can easily demonstrate.

An interesting development will be to regard Doh as a basic sound, and to test its relation with the other notes of the scale.
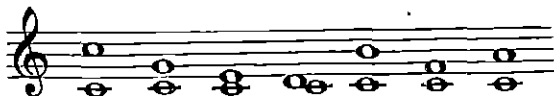
The steps should be—

(a) Teacher plays Doh—children sing the note to "loo."

(b) Teacher next plays and children sing to "loo" the note to be combined with Doh.

(c) Children listen while both notes are played together on the piano.

(d) Children to describe the effect.

(e) The name of the note played with Doh to be given.

(f) Children sing upper note while teacher plays both on piano.

Increased interest will be created if the class is divided into sections, each singing a note— this will also give very simple practice in the sustaining and blending of sounds

From this exercise the children should learn that the combinations d-m and d-l are agreeable and pleasing and go well together.

d-r and d-t are "harder" sounding or "clashing," and do not go well together.

d-f and d-s are not so smooth as d-m or d-l, but not so harsh as d-t or d-r.

Upper of Two Notes Children should be able now to recognize when two sounds are played together, and exercises similar to the following should be practised. The following combinations should be played, and the children should be called upon to sing the upper note in each case to "loo."

Upper Part of Two-part Phrases. When the children have mastered exercises of the above type they should proceed to the recognition and singing of the upper part of short two-part phrases. This is a big advance, and calls for keen listening. The teacher should play the exercises very slowly, and so give children ample time to hear and recognize each note

Exercise in Thirds—

Exercise in Sixths—

To Recognize the Lower of Two Parts It is natural for children to listen only to the upper part, which invariably contains the melody or tune, unless specially directed to do so children will not listen for a lower part. The recognition of a lower part is difficult, but can be achieved with practice.

Hidden Tunes. At first the matter should be approached in the spirit of a game—to find a hidden tune. Below, arranged for two hand playing are phrases from well-known tunes with the melody in the lower part. These should be played slowly and deliberately at first with a stress on the melody, and the children should be encouraged to listen and then to sing the lower part to "loo."

Drink to Me Only

Ye Banks and Braes

Teachers should arrange exercises as above, taking care that the melody is not too well hidden.

Songs with descant serve admirably for this purpose

Two-part Ear Tests

Having had experience in recognizing and singing upper and lower parts, the children are ready for two part singing. Simple two-part phrases should be used, and at first these should be treated as ear tests

The following exercises where the parts do not cross, will indicate the kind of test to be used

At this stage in part singing the groups should be changed over so that all have an opportunity of recognizing and sustaining a lower part.

The Selection of Songs

The choice of songs is a difficult task but extremely interesting and valuable—fortunately there is a great wealth of songs from which teachers may make their choice The selection is limited not only by the quality of music and words already mentioned, there are other considerations which demand attention.

Is the music within the child's vocal range?

Does the music contain outstanding difficulties in the matter of time or tune?

1
Doh is {
m .r :d .r | m ·— ‖ s .f :m .f | s :— ‖ f .m :r .m | f :— ‖ s .f :m .r | d .—
G |
d .t, :l, .t, | d :— ‖ m .r :d .r | m :— ‖ r .d :t, .d | r :— ‖ m .r :d .t, | d .—
‖

2
Doh is {
d'.t :l .s | l .s ‖ l .s :f .m | s :m ‖ s .f :l .d' | t :s ‖ f .l :s .f | m .—
Eb |
l .s :f .m | f ·m ‖ f .m :r .d | m :d ‖ m .r :f .l | s :m ‖ r .f :m.r | d ·—
‖

3
Doh is {
d' .r' :m' .r' | d' :— ‖ t .d' :r' .m' | r' ·— ‖ d' .m' .r' t | d' :—
C |
m .f :s .f | m :— ‖ r .m :f .s | f :— ‖ m .s :f .r | m :—
‖

4
Doh is {
d : r .m ·d .r | m :—:— ‖ d : m .r .d .t | d :—:—
A |
m, .f, .s, :m, .f, | s, .—:— ‖ m, : s, .f, :m, . r, | m, :—:—
‖

Divide the class into two groups A and B.

Instruct A to listen to the upper part, and B to the lower part, while teacher plays the full test. Each group should then sing its part to "loo." If mistakes are made the test should be played again. When children can sing the test correctly to "loo," the first note of each part should be given and children should then complete the test by singing the Tonic Sol-fa names

Does the song appeal to the child mind?

If a song satisfies these conditions it is of the right type. Frequently the term "good" is applied to music, and one may well ask, "What is 'good' music?" It is difficult to give a definition—a safe guide is to regard "good music" as that which has stood the test of time, the most exacting of all tests

In this category must be placed National,

Folk, and *Traditional* songs. These are truly a Golden Treasury—a musical heritage—and because of their infinite variety and proved merit constitute a store from which the teacher should draw very largely for Junior classes. *Sea Shanties* are very closely allied to the Folk Song They are "Work Songs," and were sung in solo and chorus by a shantyman and the sailors during their work of hoisting sail, etc. Certain of these "shanties" are quite suitable, and should be included in a school repertory.

Classical Songs. The school repertory should not be confined to the above types of songs. Children should be introduced as early as possible to the great composers The first explorations in this direction should not be too ambitious, but should be limited to the easier and shorter songs; e.g. "Cradle Song" (Schubert), "Sandman" (Brahms).

Modern music must receive attention, or children will gain the impression that music is something entirely of the past A number of British composers to-day realize the importance of writing for the child, and many suitable songs from this source are now available, and should be included if the school repertory is to be comprehensive and up to date.

Number of Songs. How many songs should a child learn in a given time—say in a year? This, and similar questions are frequently asked. It is quite impossible to answer such questions— so many factors have to be considered; the teacher, the child, time, etc. It is wrong to think of a "number of songs" for a period of time, for such an attitude is likely to limit and cramp the work. The aim should be to teach the child as many songs as possible

Unison and Part Songs. Unison songs will form the main work of the Junior School. It is essential, however, that children should appreciate (*a*) that music is not confined to *melody*; (*b*) that the general structure of music is something of which tune is only a part. This truth may be demonstrated through the medium of the *Round*, and later by the introduction of simple two-part songs.

What to Avoid. In most schools music is regarded as a subject of definite educational value, and the songs taught are usually of the right kind.

Unfortunately this is not always the case, in some schools—possibly because of the lack of a capable music teacher—the standard of songs is poor. Despite the excellent material now available for school use, it is a regrettable fact that "popular" ballads are still taught to young children. This type of song, however "pleasing," is quite unsuited to children and should be avoided.

It is also a mistake to take from a three- or four-part composition any two parts and teach them as a two-part song.

Teachers—certainly the inexperienced—are on safe ground if they confine their repertory to the types of song previously indicated.

Presentation of a Song

Having selected a song the teacher is faced with the question of presentation. It is essential that the teacher must know and understand the song thoroughly before offering it to the children.

It will *not* do for teacher and children to learn the song together—such a plan is a waste of time, and will rob the music of its beauty and joy.

In the case of a unison song an excellent plan is for the teacher to sing the song, giving it the necessary interpretation and atmosphere, and thus to let the song *presented as a whole* speak for itself. "But I am not a singer, and cannot follow this method," some one will say. It is probable that the terms "singer" and "vocalist" are being confused. Few teachers have quality of voice sufficient to justify the title vocalist, but all teachers of singing should be able to use properly what voice they have, to sing to their children. Teachers should not be afraid to make full use of their voices.

If the new song is sung to the children, the latter are thus given an opportunity for real listening. They will be able to say if they like the song, and should discuss it on very broad lines. If the greater proportion of the class likes the song—teach it. If, however, most of the children dislike the song—drop it. Should the teacher feel that it is the kind of song the children should know and like—sing it again after a week or so, and it is probable that more children will

like it. Perhaps after a third hearing—which a "good" song will "stand for"—the song will make a real appeal to all the children. Now teach it on these lines.

1. Teacher sings song.

2 Children express their liking for it because of some special quality—either melody, rhythm, or words.

3 Discussion of song—its time. Teacher sings a portion and children indicate strong beat and state the music to be 2 beats in the bar, 3 beats, etc.

4. In the case of very young children, say, 7–8 years, the song will be taught by "ear" with older children by "ear" and "notation" combined, especially if the song be simple. If notation is to be used the teacher will, by way of preparation, deal with some of the difficulties in connection with ear training and notation work

Do not make song learning a sight test. As children proceed up the school they will use notation more and more in the learning of their songs, though, of course, teachers will always be called on to pattern a difficult interval or phrase of melody or rhythm When learning a song by notation it is a very great help if the rhythm is preserved. Keep the movement of the music and insist that all shall be together—once children feel the movement of a song they will soon fit in the details of the melody. *Do not separate the melody from the rhythm.*

WHITE SAND

Round Music

Regard the three lines as a unison song and treat accordingly—sing in one line. When the children know it thoroughly, let them sing it quite softly over and over again without pause. Now explain "Round." Let children start again. At the end of the first line, teacher should join in with his appropriate part, so that when children are singing the second line the teacher will be singing the first line Children will quickly appreciate that they and the teacher are going "round and round." Now divide the class into two sections. Start off the first with the left hand, and whilst they continue to sing, "bring in" the second group with the right hand. Next make three groups. *None but soft singing must be permitted* There must be no attempting to "drown" a section.

Finish (1) in rotation, by signal or, say, after a certain number of times. (2) On a signal, each part holding on its note—this will enable children to appreciate the harmony *Do not teach one line only to a section of children.* Do not allow any but soft singing. Avoid rushing the time.

Part Songs

When children have mastered rounds and can sing them in a sweet tone, and with a due regard for time, two-part singing may be introduced. It is assumed that some practice will be given by way of preparation in simple two-part exercises during the ear-training and notation work (see pp. 1347–56). The first essential is that the early two-part songs shall contain parts which have some movement and interest of their own The teacher cannot tackle them on the same lines as the unison song—*it is impossible* to sing both parts at once, though it may be done by two members of the staff. Failing this the teacher must play both parts on the piano, and thus let children hear the harmony—the teacher will also sing one part and at the same time play the other Discuss the song—its time, difficulties of notation—"pattern" any difficulties. Now allow children, both parts, to have a shot at the song. They will make a better attempt than is

generally supposed Point out to the "1sts" the errors made, say, in the first phrase. These collected, let both parts again sing the first phrase. Now deal with errors made by the "2nds." Now both parts together—correct! Splendid! Now sing softly and "hear" the result. Continue through the song keeping both parts going together as far as possible, so that children realize that the parts—equally important—make a "whole." Guard against (1) heavy, rough singing by any section as a means to "keeping its end up." (2) Rushing of time Insist on "hearing" and "fitting in" with the other part.

If a large and varied repertory is to be built up it is impossible to secure a highly finished performance of every song. Children should be encouraged to perform as well as possible, and every class should be able to sing a few of their songs with some degree of finish—the children feel and know when their singing is good, and they enjoy their "best" songs. As a general rule, however, song singing in the Junior School should be "free," as opposed to highly finished This does not mean that harsh tone or slovenly work is to be tolerated. The regard for sweet tone and correctness of music must always be required

If an intelligent interpretation is to be given, the children must understand the song—they must grasp its meaning and appreciate the relation of words and music *Understanding must precede interpretation.* When the children have grasped the song, they will be able to give the correct expression broadly. They will know if the song is vigorous, jolly, broad and majestic, peaceful, sad, etc., and having got the broad mental effect of the song, they will be able in some degree to supply a correct "expression." Naturally they will need the guidance of the teacher, but the latter must not supply the interpretation and expression entirely. The children must be encouraged to think and sing with intelligence.

National and folk songs are essentially simple in character and direct in their appeal Do not overload these with "expression" or kill them with conducting. Preserve their shape by keeping the rhythm, sing them simply and sweetly, and their appeal will be such that the children will readily respond. Classical and modern songs —the composed songs as contrasted with the national and folk songs of the people—are more elaborate in character and structure and call for fuller treatment But even in the case of these, the children should be encouraged to interpret, and not depend entirely on the teacher.

Conducting

In some cases the duties of conductor and accompanist are borne by one person—in others one teacher will conduct while another plays the accompaniment In the case of the conductor-accompanist, it is essential that the piano be so placed that all children are able to see the teacher's face, for in this case the teacher's suggestions will come via facial expression. The teacher must also be sufficiently capable as a pianist to be able to manage without a copy. If the teacher's eyes are glued to his copy, he will be quite unable to "bring in" his class at an awkward place, etc., and his general control of the singing will suffer. In the case where one conducts and another plays the accompaniment, the situation of the conductor must be so placed as to be easily seen by the whole class, and also by the accompanist.

Points for Conductors

1. Encourage intelligent response rather than blind following.

2. Conductor and choir must be "one," linked together by the former's qualities of personality, magnetism, sympathy, understanding. This link though strong and binding is quickly broken by the slightest inattention to the work in hand It is almost impossible to establish this bond if the conductor is dependent on the copy. *Memorize thoroughly and conduct without the copy. If the conductor has eyes for the choir, the choir, too, will have eyes for the conductor.*

The singing will depend more on the face and eyes than on the arms of the conductor.

3. *Beating Time.* "Don't mistake bustle for business," someone once said This is certainly true in connection with conducting. Some conductors fear they have not done their work unless they are physically tired afterwards. Such a

condition is usually the result of excessive rigid arm movements.

All movements should be free and in the nature of curves rather than angles. Every movement should mean something, thus a little movement of the fingers of the beating arm could mean *p.p.* singing—a movement of the hand and forearm a crescendo. It is impossible to suggest movements for conductors. Each must work out his own, but should see that they are simple, definite in meaning, and thoroughly understood by the children

Commencing a Song

It is altogether unnecessary to count loudly for a class in order to "bring them in to time." It is also impossible to secure a proper and adequate attack if the choir is expected to start singing with the conductor's first movements, e g. suppose the song to be "Early One Morning"—

Display of Powers

Children and teachers alike will be keen to do their best. Care, however, will be needed to prevent doing things which display the vocal abilities merely for the sake of effect. It is sometimes difficult to abstain from this form of showing off at Prize Day or at the School Concert. Remember it is the song which matters. Do not sacrifice its beauty or interrupt its message and meaning by holding on to a note merely to display the vocal powers of the children. Mr. Plunkett Greene has said. "Never interrupt the 'march' of a song," a sound piece of advice.

Individual Singing

Music is not taught with a view to producing soloists. If, however, the subject is well taught, it will be found that children will be able to sing

Ear-ly one morn-ing, just as the Sun was ris-ing I heard a maid sing in the val-ley be-low

or any other song beginning at the first beat of the bar. It will not do for the conductor to hold his arm, arms, or baton aloft · drop same for downward beat, and expect a clean simultaneous attack.

There must be a slight *upward movement* from the conductor preparatory to the down beat if a clean start is to be made. The same is true when commencing any song, irrespective of the position in the bar of the first note.

Pianoforte Introduction

When a song has an introduction, children must appreciate that the introduction is part of the song. They should sing mentally through it, and so be ready for the actual singing which follows.

alone Individual work is encouraged in reading and recitation, and it does not seem an impossible step to individual singing. The value of combined singing cannot be overestimated—at the same time individual effort is to be encouraged. Individual singing is productive of good, if handled with care—there must be no idea of "showing off." Such singing, if attempted, should be regarded as a definite part of the ordinary music lesson, and children called on to sing to the rest of the class should do so quite easily and unaffectedly.

Music for Junior Schools

It is impossible to do more than suggest, and the following list, based on experience, is offered only as a guide to the kind of music.

COLLECTIONS OF SONGS

The New National Song Book	Stanford—Shaw	Boosey & Hawkes
English Folk Songs for Schools	Baring Gould and Sharp	Curwen
Songs of Britain	Kidson and Shaw	Boosey & Hawkes
Shanty Book, I and II	Terry	Curwen
Songs of the British Islands	Hadow	Curwen
Graded Rounds and Catches	——	Curwen
Golden Treasury of Song for Children	(Classical Songs)	Boosey & Hawkes

UNISON SONGS (apart from those included above)

The Piper and the Cow	Scottish Air—arr. Dunhill	Novello
Cradle Song	Brahms	Curwen
Rose among the Heather	Schubert	Novello
Cradle Song	Schubert	Novello
Tinker's Carol	Ursula Greville	Curwen
Some-one	Harris	Year Book Press
The Sky in the Pool	Dunhill	Year Book Press
When Daisies Pied	Arne	Curwen
Jerusalem	Parry	Curwen
Who is Sylvia	Schubert	Novello
An Old Carol	Quilter	Boosey & Hawkes
What became of them (The Rats)	Walford Davies	Novello
England	Owen Mase	Curwen
You'll Get There	Parry	Year Book Press
The Month of Maying	Baker	Year Book Press
The Organ Grinder	Schubert	Rogers
The Holly and Ivy Girl	Irish Folk Song—arr. Charles Wood	Year Book Press
The Owl	Dunhill	Curwen
Sir Eglamore	Arr. Gardner	Novello
The Wind	Judd	Boosey & Hawkes
In 'Frisco Bay	C Sharp	Novello
Will you walk a little faster	Macdonald	Novello
My Boy Billie	Arr. Vaughan Williams	Novello
If all the world were paper	Shaw	Year Book Press
Boot, Saddle, to Horse	Dyson	Year Book Press
England	Parry	Year Book Press
How far is it to Bethlehem	Shaw	Novello
Londonderry Air	——	Novello
An Old Legend	Tchaikovsky	Curwen
The Tiger Song	Wolstenholm	Curwen
The Animals went in two by two	Arr. Gerrard Williams	Curwen
Linden Lea	Vaughan Williams	Boosey & Hawkes

TWO-PART SONGS

Bobby Shaftoe	Thompson	Novello
Song of the Shipbuilders	(Canon) Holst	Novello
Sir Eglamore	Arr. Gardiner	Novello
Clouds o'er the Summer Sky	(Canon) Holst	Novello
Lullaby	Brahms—arr West	Novello
A Song of the Nights	Parry	Arnold
The Little Sandman	Brahms—arr Harrison	Boosey & Hawkes
I know a bank	Shaw	Cramer
God sends the night	Rathbone	Novello
Twinkle, twinkle little Star	Rathbone	Novello
Shepherd, Shepherd, leave your labours	Purcell's "King Arthur"—arr Holst	Novello
The Frog and the Mouse	Shaw	Curwen

APPRECIATION OF MUSIC

SOME teachers still regard appreciation of music as a mere frill, as something of little or no educational value; others view it as a new subject for which there is no place in an already overcrowded time-table. These are entirely wrong views—musical appreciation is not a useless frill, neither is it a new subject demanding a special place in the time-table It is a *Method* which gives the power to estimate and realize values The fixing of a new note, the cultivation of a beautiful tone, the understanding and enjoyment of a rhythmic pattern, and so on—all contribute to a sense of musical values, and therefore are definite steps in appreciation Every lesson should be approached in the spirit of interest, understanding, and enjoyment. Each child should be active throughout the lesson, for it is through "doing" that realization will result. The ultimate aim of music teaching is the creation of intelligent listeners. Our children, therefore, should have some idea as to how music is produced, what it is, and what it expresses. Side by side with the general *teaching of the subject already outlined it would be well to give attention to definite appreciation* work. Occasional lessons—or parts of lessons—should be devoted to this valuable aspect of the subject The age of the children should always be borne in mind and care must be taken to prevent the work from becoming too formal or "interest" will disappear. The following are some of the broad points that should receive attention

How Sound is Made

It can be demonstrated and explained in simple *non-technical language that "sound" is the result* of vibration, and that different substances vibrating produce different sounds. For this purpose the teacher will find abundant material to hand for simple experiment—the twanging of a stretched string or wire, blowing at end of glass tube, the ringing of the school bell, etc

Quality of Note

It is easy to show that the same note can be produced in a variety of ways The teacher can sing a note which can then be played on the violin, piano, whistle-pipe, etc The children will recognize quickly that, though the pitch or tune of the note is the same in each case, the quality or character of the note varies with the instrument employed. Proceeding on these lines the main groups of musical instruments—the string family, the blower family, the banger family—may be introduced, and the gramophone used to demonstrate the special qualities of each. (See PRACTICAL JUNIOR TEACHER Music Chart for illustrations of instruments) Whilst children should have opportunities of hearing the various instruments, it is hoped that no great stress will be laid on "the picking out" of individual instruments from a performance by a combination of instruments.

Intensity of Sound

It can be easily demonstrated that sounds differ in "quantity" as well as in quality, and children should be given opportunities to appreciate the value of intensity. In illustrating this point the terms "loud" and "soft" music will serve very well.

Melody

A tune makes a definite appeal, and a good melody should be offered to the children a monotonous one-note drone should then be played by way of contrast. In this way it should be shown that a melody derives its value from having—

(a) An adequate variety of notes and a definite climax.

(b) A good swing or rhythm.

There is abundance of suitable music in our National and Folk Song Books to illustrate the quality of melody—the gramophone should also be used.

Note

(a) It is usual for the melody to be in the top line, when it is easily recognized. Children

should listen to music where the melody is not in the top line—this calls for active participation on the part of the child.

(b) The value of "swing" or rhythm in music cannot be over-estimated, and the children should listen to a variety of rhythmic patterns. Rhythm as expressed by drums is most effective, though there is a complete absence of melody.

Musical Form

It is not proposed that definite instruction should be given under this heading: much, however, may be attempted in a very simple way to prepare the children for systematic work later on. It may be shown that music, like all else, has definite shape and form, that it has grown through the ages from very simple to more complicated structure. The simple nursery or national song may be contrasted with the more complicated orchestral works. The development of music may be traced by beginning with the examination of a simple song. Take, for example, the well-known Welsh song "The Ash Grove." It can be shown that this simple piece of music falls easily into sections of eight bars. The first section is repeated, next comes a fresh one of eight bars, and the song is completed with a repetition of the first section. This "form" is described as A.A.B.A., and the plan of construction is principal melody, contrasting tune (or episode), recapitulation. Children will appreciate that the middle tune is quite different from the principal tune, to which it comes as a welcome contrast. It is by no means essential that children should know the various names used to describe form. Teachers may use any simple method of description they think necessary. Following the above method, music should be studied in a quite informal and "play-way" in order that children may appreciate in some degree the value of—

Changes of key or time.
Use of modes, major and minor.
Change of phrase.
Use of repetition, imitations, etc.

The children should be introduced to a variety of music covering the following—

1. Marches.

2. The old dance forms—gavotte, minuet, gigue, bourrée, etc.

3 Music: cheerful, sad; quick, slow, etc. The gramophone is a great asset in this connection, and the gramophone companies issue records in wide variety which may be used for illustration It should be remembered, however, that the gramophone is to supplement the teacher's own illustrations, to bring into the school more comprehensive examples of music which serve further to demonstrate points already taught in a simple way.

Care must be taken to prevent "gramophone work" from becoming the mere singing or playing over of a piece of music for purpose of entertainment.

Certainly the children should be interested and entertained, but they should also be educated. The children should be encouraged to listen for points of definite interest a specially beautiful melody, a peculiar rhythmic pattern, the instrument playing the melody, points in the structure of the music, etc. It is in its use for repetition purposes that the gramophone is perhaps most valuable A particular piece may be played again and again, but at each hearing the children should listen for some definite point which will enable them the better to appreciate the work as a whole. In addition to hearing gramophone records every opportunity should be taken to listen to "live" music. In some districts small ensembles of musicians visit schools, and give short programmes of suitable instrumental and vocal music, and parties of children also pay educational visits to large halls to listen to string orchestras, full orchestras, military bands, etc. As a final word, do not suggest the meaning and purpose of the music— let the music speak for itself. Guide the children whenever possible, remembering that music makes an individual appeal.

Biography

Added interest will be created in the music if the children are told something of the composer. There are many excellent books covering this aspect, but teachers must be careful to confine their references to the "peculiar human touches" only.

Gramophone Records

The following list merely suggests the kind of record suitable for appreciation purposes in the Junior School—

	TITLE	COMPOSER	PERFORMER	COMPANY AND No
1	Nursery Rhymes	—	Mayfair Orch.	H M V , A817
2	„ „	—	„	H.M.V., A818
3	Instruments of Orchestra	—	—	H M V , D555
4	„ „	—	—	H.M V., D556
	Violin Solos—			
5	{ Bourée, B Minor	Bach	Szigetti	Col , D1633
	{ Brazilian Dance	„		
6	{ Air on G String .	Bach	Strockoff	Col , 963
	{ Ave Maria	Schubert		
7	{ Gavotte	Bach	„	Col., 2577
	{ Minuet	Beethoven	„	
8	Humoreske	Dvorak	Kreisler	H.M V., DB314
9	Capricieuse .	Elgar	Heifetz	H M.V , DA243
	'Cello Solos—			
10	{ Slumber Song	Schubert	Cedric Sharpe	H M.V., E146
	{ Serenade			
11	{ Romance sans Paroles	Davidoff	W. H. Squire	Col , L1534
	{ Keltic Lament	Arr Squire	„	„
	Pianoforte—			
12	{ Gigue (5th French Suite)	Bach	Myra Hess	Col , 1635
	{ Jesu, Joy of Man's Desiring	„	„	
13	Moonlight Sonata	Beethoven	Friedman	Col , L1818
14	„ „	„	„	Col., L1819
15	{ Norwegian Bridal March	Grieg	Hambourg	H M V., D68
	{ (a) Pastorale, (b) Capriccio	Scarlatti	„	„
	Orchestral—			
16	Children's Overture	Quilter	New Queen's Hall Orchestra	H.M V , D47
17	Funeral March of Marionette	Gounod	New Sym Orch	H M V., D142
18	{ Peer Gynt Suite	Grieg	„	H M V., D156
	{ Morning. Death of Aase	„	„	Col , 9309
19	Henry VIII Dances	German	„	H.M V , B120
20	{ Minuet	Beethoven	St James' Sextet	Col., 4216
	{ Drink to Me Only .	Traditional	„	„
21	Londonderry Air	Many arrangements		
22	{ Wand of Youth Suite	Elgar	The Sym Orch	H M V , D178
	{ Cockaigne Overture	„	„	H M V , 08076
23	Molly on the Shore	Grainger	Flonzaley Q'tte.	H M V , D153
24	{ Midsummer Night's Dream	Mendelssohn	Royal Albert Hall Orchestra	
	{ Overture .	„	„	
25	{ Nocturne Midsummer Night's Dream	„	„	H M V , D152
	{ Scherzo .	„	„	„

H.M V and Columbia companies have Educational Departments—see special catalogues.

RHYTHMIC WORK

THIS scheme is suitable and adaptable to the needs of children from 7 to 11 years of age. It continues the Rhythmic training described in *Practical Rhythmic Studies for the Kindergarten* (Sir Isaac Pitman & Sons, Ltd). The greatest difficulty in the teaching of this subject is finding music suitable for use. Musical examples are given for the exercises, but these, if possible, should be supplemented by improvised music. This section will be enlarged and re-published, with additional dances, very shortly.

I. PRELIMINARY EXERCISES

Begin lesson with exercises which require attention and response, thus creating an atmosphere of alertness and concentration.

Formation of class. Two circles, one within the other, moving in opposite directions.

Music Play a march with well defined rhythm (page 1383). Varied commands which necessitate silent counting should be given while children are marching, such as—

At the command, "Change"—

1 Double the pace (run eight steps to a bar)

2. Slow march (two slow walking steps to a bar).

3. Step backward, for a given number of beats (two, four, etc.).

4. A spring forward, backward, or sideways.

5. Kneel, for a given number of beats.

6. Change position every four beats. Stand, kneel, sit, lie down, return to former position, performing same movements.

7. Mark first beat of bar, stamping slightly and clap the last beat of bar. At "Change" reverse the action, clapping the first beat, and stamping the last beat.

More Advanced Exercises

1 Outer circle march—inner circle double the pace—at "Change," outer circle double the pace —inner circle march.

2. Outer circle march, clapping twice to each beat, inner circle run, clapping the beats; at "Change" *vice versa.*

3. Outer circle march, inner circle kneel for given number of beats, then change over. If number of beats given is eight, the circle kneeling must stand on the eighth beat (silent counting) in order to begin marching on the first beat of the following bar.

MARCH

GWYNNE DAVIES.

Strong March Rhythm.
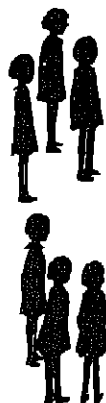
II. SUCCEEDING EXERCISES

1. Change of bar time.
    Beating time, and walking to crotchets

    $\frac{2}{4}$ $\frac{3}{4}$ $\frac{4}{4}$ $\frac{5}{4}$ $\frac{6}{4}$.

2. Note values—

    Stepping notes of half, one, two, three, four beats in value.

3. Phrasing.
4. Melody and bass.

These exercises are arranged to carry on the rhythmic training in *Practical Rhythmic Studies for the Kindergarten*. It is advisable to recapitulate the exercises on "Beating Time," before proceeding with the more advanced work.

1. *Change of Bar Time*

Formal exercise　Walk to crotchets, and beat time, marking first beat of bar with a slight stamp.　On the last beat of Bars 7, 14, 18, 22, at command "Change" add a beat to the following bars, changing duple time to triple, triple time to quadruple, etc.

Bars 1–7.　　Duple Time. Two beats to a bar. Beat time with both arms, moving arms gracefully up and down.

Bars 8–14.　　Triple Time. Three beats in a bar. Arm movements. Down, out, up.

Bars 15–18.　　Quadruple Time. Four beats in a bar. Arm movements　Down, in (move arms inwards in front of chest), out (extended sideways), up.

Bars 19–22.　　Five-four Time. Five beats in a bar. Arm movements, down, in (inwards in front of chest), forward (extended in front of chest), out (extended sideways), up.

Bars 23–26.　　Six-four Time. Six beats in a bar. Arm movements. Same as five-four time, with third beat repeated. Down, in, forward, forward, out, up.

1. Exercises for Beating Time.
   Change of Bar Time $\frac{2}{4}, \frac{3}{4}, \frac{4}{4}, \frac{5}{4}, \frac{6}{4}$.

Well defined rhythm emphasizing first beat of bar.

2. Note Values

At this stage teach names of notes, their value in beats, and symbols by which they are known. By stepping following exercises, children will realize varying lengths of notes.

Bars 1-8.   *Exercise* 1.   Crotchets and Quavers.

    (*a*) Step melody. Four walking steps (first bar), eight running steps (second bar).

    (*b*) Beat time and step melody.

    (*c*) Divide class into crotchets and quavers. "Crotchets" step walking notes and stand still while "Quavers" step running notes At "change" crotchets become quavers and *vice versa* Beat time throughout the exercise whether moving or standing still.

Bars 9-16.   *Exercise* 2.   Minims and Crotchets.

    Practice stepping notes of two beats (minims). The two beats can be indicated by one step forward (1st beat), and slight bend of knee (2nd beat)

    (*a*) Step melody. Divide class into minims and crotchets and proceed as in previous exercise, thus emphasizing the note values.

    (*b*) Beat time and step melody.

2. Exercises for stepping notes of half, one, two, three, four beats in value.

EXERCISE 1.

EXERCISE 2.

Bars 17-32   *Exercise* 3.   Dotted Minims and Crotchets.

The three beats of the dotted minim can be indicated by a step forward with left foot (1st beat), place right foot forward on toe (2nd beat), to heel of left foot (3rd beat). Repeat taking one step forward with right foot, etc

(*a*) Step melody.

(*b*) Beat time and step melody

Bars 33-40.   *Exercise* 4.   Semibreves.

Play music, and let children sing the long sustained notes, four beats in value. The four beats of semibreve can be indicated by one step forward with left foot (1st beat), place right foot forward (2nd beat), sideways (3rd beat), and to heel of left foot (4th beat) Repeat taking one step forward with right foot, etc

(*a*) Step melody.

(*b*) Step melody, at same time, sing semibreves using words, "one, two, three, four," also clapping first beat of each bar, and keeping hands firmly clasped for four beats

(*c*) Beat time and step melody.

EXERCISE 3.

EXERCISE 4.

3. *Phrasing Exercises*

Play simple nursery rhymes, folk songs, and dances. Let children step the melodies. Draw their attention to the stopping places or pauses. They will very easily recognize the division of the music into phrases. Country dance music (Cecil Sharp) is very suitable for this exercise. Let children dance freely, indicating the end of a phrase by a change in their movements. The phrasing in the music on page 1389 is simple and clearly defined, giving the impression of question and answer.

(*a*) Step melody carefully, noticing pauses and stepping very softly Bars 6 and 7, 12 and 13, 27 and 28, 31 and 32.

(*b*) Step first phrase, stand still and clap second phrase, etc.

(*c*) Divide class into three groups "Question," "Answer," "Echo." Step melody as follows *Bars* 1-3. "Question." *Bars* 4 and 5. "Answer." *Bars* 6 and 7 "Echo."

Bars 8-13 Same construction. "Echo" does not appear again till Bars 27-28, and Bars 31-32.

Another very suitable piece of music for phrasing is Chopin's prelude op. 28, No 7. It contains eight simple phrases of similar construction.

Divide class into four groups, and choose a conductor. This adds greatly to the interest given to the exercise. At each succeeding phrase, the conductor motions to one or more groups to move in various directions.

Formal Exercise

Four groups, forming corners of square, conductor in centre.

First four phrases. The conductor motions each group in turn to dance (in rhythm to music) towards centre.

Fifth phrase Motions all groups to move round (clockwise).

Sixth phrase. Advance again towards centre.

Seventh phrase Retire.

Eighth phrase. Gradually kneel as music fades away.

4. *Melody and Bass*

This is a favourite exercise with children.

(*a*) Step Melody and sing it to lah-. Repeat exercise, playing only bass (accompaniment), thus emphasizing the two parts.

(*b*) Formation—two circles, one within the other, moving in opposite directions. Inner circle step melody, outer circle step bass. At "Change" reverse movements.

(*c*) More advanced exercise. Inner circle step melody and clap bass. Outer circle step bass and clap melody. At "Change" reverse movements.

3. Phrasing Exercise.

MOZART.

4. Melody and Bass.

BEETHOVEN.

III. RHYTHMIC PLAYS AND DANCES

I FAIRY FOLK

Come, little folk, pack up your toys,
The clock is striking eight,
Come to the land of fairy dreams
Before it is too late.
For when the shadows creep around,
And stars are shining bright,
The music of the fairy elves
Steals softly through the night.

It stirs the little whisp'ring leaves,
It wakes each sleeping flower,
All Fairyland springs into life,
At midnight's magic hour
Then in the moonlight, fairy folk
With footsteps light and gay,
Dance merrily o'er hill and dale
Until the break of day.

Free Formation

Two groups—Elves and Fairies hiding in corners of hall, children playing with toys in centre.

Elves and Fairies spring up and run lightly to rhythm of music (Bars 1–4). Sing first verse (Bars 5–13) to children, performing movements suggested by words. Towards end of verse, steal softly back to places, and sing to "oo"

(Bars 14–21). Children, attracted by music, jump up and dance about, listening and seeking for Fairies. Towards end of music, return to former position and play with toys.

In second verse action is similar. The children again leave their toys and seek for Fairies. Towards end of music (Bars 18–21) Elves and Fairies spring up and lure them away to Fairyland.

Formal Setting

Formation. Two groups—Elves and Fairies in corners of hall. Children in centre playing with toys.

Movements during Song—

Bars 1–4 Entrance of Elves and Fairies. Run lightly on toes to rhythm of music, forming circle round children, as far away as possible

Bar 5. Run toward children, waving arms gracefully at sides.

Bar 6. Assume listening attitude.

Bars 7, 8. Beckon to children and point in direction from which they have come

Bar 9. Turn round on spot with four quick steps, circling arms above head.

1. FAIRY FOLK

Words by
KATHLEEN MORTIMER.

Music by
GWYNNE DAVIES.

Sprightly. ♩ = 112.

1. Come, lit - tle folk, pack up your toys, The clock is strik-ing eight,   Come
2. It   stirs the lit - tle whisp'ring leaves, It wakes each sleep-ing flower   All

to the land of fair - y dreams Be - fore it is too late   For
Fair - y - land springs in - to life, At mid-night's mag-ic hour.   Then

Bar 10. Run back to places

Bar 11. Throw head and arms upward, placing left foot behind (on toe).

Bars 12, 13. Run into former position and sing very softly the "music of the fairy elves" (Bars 14-21)

Bars 14, 15. Children jump up and dance (polka step twice) towards Fairies.

Bar 16 Walk four steps, bending forward, listening to Fairies' music.

Bar 17 Kneel down, place both hands on floor listening

Bars 18-21. Dance back again and continue to play with toys.

Movements in second verse are similar to those in first verse. When children are kneeling (Bar 17) Elves and Fairies spring up, and run toward them, each child being surrounded by Elf and Fairy. All dance away to Fairyland (corners of hall)

Dance. (Groups of three) Repeat music of song.

Bars 1-4. Run into position for dance, forming rings of three : Elf, Fairy, child.

Bar 5. Run eight steps to left

Bar 6 Turn round on spot (five little steps) clapping hands.

Bars 7, 8 Repeat movements of Bars 5 and 6, forming ring, and running to right.

Bar 9. Elf and Fairy form ring round child and run five steps to left. At fifth step, child breaks through ring and runs out.

Bar 10. Elf and Fairy dance away with eight steps, beckoning to child on 1st and 3rd beats. Child follows.

Bar 11. Elf and Fairy advance with four steps, springing forward on 3rd beat, child dances away.

Bars 12, 13. Repeat movements of Bars 10, 11.

Bars 14, 15. Join hands and dance forward (child in centre), polka step twice.

Bar 16. Elf and Fairy face, join hands to form arch. Child runs quickly (eight steps) round Elf, entering arch from back.

Bar 17. Caught by Elf and Fairy, coming through arch.

Bars 18-21. Repeat movements of Bars 14-17. Second time, child runs round Fairy.

when the shad-ows creep a-round, And stars are shin-ing bright, The mus-ic of the fair-y elves Steals
in the moonlight, fair-y folk With footsteps light and gay, Dance mer-ri-ly o'er hill and dale Un-

ten.

soft-ly through the night.
-til the break of day.

Oo — — — Oo — —

Oo — — —

Oo — — —

D.S.

Oo — — —

2. THE ORGAN GRINDER (THE HURDY-GURDY)

Synopsis—.

1. Introduction. Entrance of Organ Grinder and Children.

2. Children dancing to the Organ
3. Gipsy Dance.
4. Repetition of Children's Dance.

1. *Introduction.*

Bars 1–4.   Several children dance toward centre. See Organ Grinder approaching, call to others.
Bars 5–12. Children dance round gaily waving hands. Organ Grinder emerges from their midst, accompanied by Gipsy Girl carrying tambourine. Takes up position indicated on plan. Toward end of music, children go into places for dance (see Fig. 1)

Partners   Partners

●- - - - - - - ●   ●- - -   - - ●

●- - - - - - - ●   ●- - -   - ●

●- - - - - - - ●   ●-   - -●

×
Organ Grinder
and Gipsy Girl
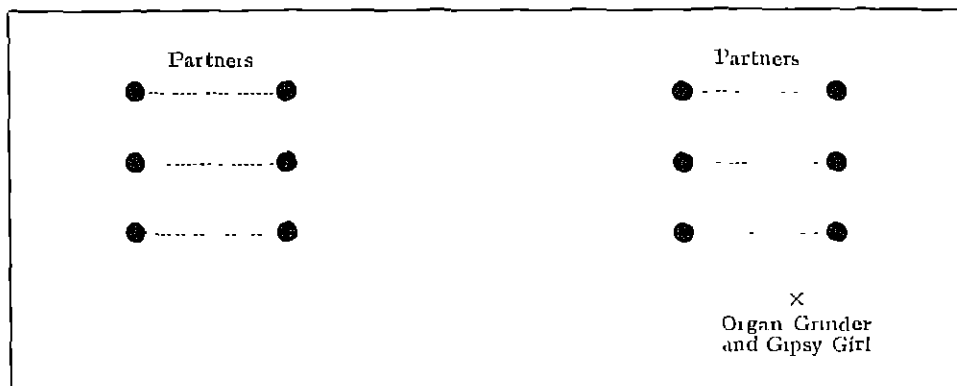
FIG. 1
Plan for " Children's" Dance

2. *Children's Dance*

Bars 13, 14. Formation   Couples face front (see Fig 1).
Bar 15. Polka step, sideways. Step to left with left foot (stamping slightly), bring right foot to left (right toe to heel of left foot), step to left with left foot
Bar 16. Cross right foot over left and pivot, turning round to left on toes.
Bars 17, 18 Repeat movements of Bars 15 and 16, stepping to the right with right foot.
Bars 19, 20. Retire eight quick steps on toes.
Bars 21, 22. Advance with polka step twice, beginning with left foot. Repeat movements of Bars 15–22.

2. THE ORGAN GRINDER

1. INTRODUCTION.

GWYNNE DAVIES.

In a droll manner. ♩ = 100.

2. CHILDREN'S DANCE.

Bars 23–26. Face partner. Run toward partner (four steps), link right arms, turn round twice with partner (eight steps), run back to places (four steps)

Bars 27–30 Repeat movements of bars 23–26 linking left arms

Repeat movements of bars 15–22.

Children disperse, and sit in groups, leaving centre free for Gipsy Girl to dance.

3. *Gipsy Dance*

Bars 1, 2. Dance to centre, ready for dance Left hand raised holding tambourine, right hand on hip. Left foot pointed.

Bars 3, 4. Chassé step, dancing forward to the left (see Fig. 2) Step forward with left foot, quickly place toe of right foot to heel of left foot. Do this eight times, stamping first step, at the same time rap tambourine
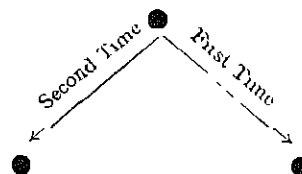
Fig. 2

Diagram · Gipsy Dance

Bars 5, 6. Retire to former position with polka step, beginning with right foot. Rap tambourine on first beat of each bar.

Bars 7, 8. Chassé step, eight times forward, to the right, stamp first step (right foot) and rap tambourine.

Bars 9, 10. Retire to former position with polka step, beginning with left foot. Rap tambourine on first beat of each bar

Bar 11. Hop on left foot, touching floor with toe of right foot Hop on left foot, raising right foot in front of left knee. Hop on left foot, touching floor with toe of right foot. Hop on right foot, raising left foot in front of right knee. Rap tambourine on first beat of bar.

Bar 12 Cross left foot over right and pivot, turning round to right on toes (three beats). Arms arched over head, tambourine silent. Spring on toes rapping tambourine over head (fourth beat).

Bars 13, 14. Repeat movements of bars 11 and 12, hopping on right foot, etc., and crossing right foot over left, turning round to left, etc.

Bars 11–14. Repeat music—

Bar 11. Polka step forward, beginning with left foot.

Bar 12. Turn completely round (clockwise) with four hops, hopping on left foot with right knee raised in front. Strike tambourine four times on knee.

Bars 13, 14 Repeat movements of bars 11 and 12, retiring to former position On last chord of bar 14 hold tambourine above head.

Bars 3–10. Gipsy dances in and out amongst the children collecting pennies in tambourine.

4 *Repetition of Children's Dance*

3. GIPSY DANCE.

4. OLD ENGLISH DANCE

Music. Minuet in G, Beethoven (H.M.V. Gramophone Record).

Formation. Sets of eight, four couples.

Movement Partners face, join right hands (Fig. 4). Music begins on 3rd beat. Point left foot

Bar 1. Three dainty tripping steps, beginning with left foot.

Bars 2, 3. Point right foot (1st and 2nd beats), step sideways toward partner, looking under arch (3rd beat of bar 2, and 1st beat of bar 3).

Bars 3, 4. Repeat, stepping in opposite direction (3rd beat of bar 3, and 1st and 2nd beats of bar 4). Point left foot (3rd beat of bar 4).

Bar 5. Three tripping steps, beginning with left foot

Bar 6. Point right foot (1st and 2nd beats). Partners face (3rd beat)

Bars 7, 8 Girls, low curtsey, Boys bow, Repeat movements of bars 1–8. Same music repeated.

Second part of music (8 bars)—

Partners turn in opposite directions. Girls to right. Boys to left.

3rd beat. Point left foot.

Bar 1 Three walking steps, beginning with left foot

Bar 2. Point right foot. Turn on 3rd beat to meet partner.

Bars 3, 4. Repeat movements of bars 1 and 2, partners meeting and joining right hands on 3rd beat.

Bar 5. Three tripping steps, beginning with left foot.

Bar 6. Point right foot (1st and 2nd beats), partners face (3rd beat).

Bars 7, 8. Girls curtsey, boys bow.

Quick Movement. (16 bars.) Join hands and form ring of eight, point left foot (3rd beat).

Bars 1, 2. Twelve running steps to the right.

Bars 3, 4. Repeat to the left.

Bar 5. Drop hands, girls run six steps to centre, turning to face partner.

Bar 6. Boys follow

Bars 7, 8. Join hands, run six steps back to places, boys running backward.

Partners join both hands (3rd beat).

Bars 9, 10. Nine running steps to the right—turn in opposite direction on last three notes of bar 10.

Bars 11, 12. Nine running steps, drop hands on last three notes of bar 12.

Bar 13. Girls run six steps to centre.

Bar 14. Boys follow.

Bars 15, 16. Return to places as before.

Repeat dance from beginning (8 bars).

FIG. 3
Dancing to the Organ

FIG 4
Old English Dance

IV. MUSICAL INTERPRETATION

Interpretation forms an important section of rhythmic work. It gives children plenty of scope for free expression, developing their sense of perception and feeling, whereby they portray through movement, the appeal made to them by the music.

In the earliest stages, the dramatization of nursery rhymes, folk songs, etc., makes an excellent beginning. Later, select music from such works as *Album for the Young* (Schumann), *Child Life* (Kullak), *Lyrische Stucken, Book I ; Peer Gynt Suite* 1 (Greig), *Forgotten Fairy Tales, Woodland Sketches* (MacDowell), *Ballet Music,* and *Overture to William Tell* (Rossini), etc.

Music selected for Interpretation—

1. To a Wild Rose.
2. In Autumn.

From *Woodland Sketches* (MacDowell).

1. TO A WILD ROSE

The rhythm of this charming little melody is simple, direct, and will be easily grasped by children

One of two methods can be adopted.

(*a*) The children hear the music, and it suggests ideas.

(*b*) The ideas are first suggested to them, and they listen to the musical interpretation. They then express by movements the ideas they have formulated, dancing to the rhythm of the music.

Suggestions. Formation of flower. Five fairy petals form ring round Rose Fairy. Dance daintily and quietly, whispering to her that winter is past, and spring is calling. Finally kneel forming ring round her, as music draws to a close (16th bar).

Music changes, Rose Fairy springs up and dances and waves her arms over each fairy petal in turn. She then returns to the centre calls fairy petals; they extend arms upward toward her. She gradually disappears as fairy petals slowly rise (last four bars of music *dim ri"ard.*) Fairy petals' music repeated, dance as before. Rose Fairy hears her music, springs up, dances joyously, calls again to fairy petals, they extend arms upward toward her, and rise on high chord, five bars before the end. Music, played very slowly, gradually dies away, fairy petals fall, and fade away, but Rose Fairy remains on one knee with arms extended upward looking upward, symbolical of the spirit of the rose.

2. IN AUTUMN

Great contrast to previous study Music buoyant, exuberant, suggesting quick movement.

Suggestions Wind rises, becomes boisterous—leaves blown from trees and whirled along the ground—seems to subside—then rises again—gradually ceases as music dies away—(28 bars).

Music changes to sad, dignified mood, suggestive of the approach of autumn—surveying destruction caused by wind—(20 bars).

Next eight bars, music very soft and mysterious—distant moaning of wind—becomes more insistent. Original theme repeated (28 bars)

THE BACKWARD CHILD

EDUCATIONAL backwardness may spring from one of two main causes, from some innate defect in either mental or emotional disposition, or from purely accidental or acquired causes

Frequent or prolonged absence, owing to ill-health or accident, frequent change of school, irregularity of attendance, or late admission to school is often found to be the main cause of backwardness in a child of normal intelligence, while some physical defect of eyesight or hearing is often a predisposing factor Any of these causes, combined either with one another or with faulty methods of teaching, may produce an appearance of hopeless dullness in a quite intelligent child

Such children do not, as a rule, require a special class, since in subjects such as history, geography, Nature study and literature, they are quite equal to, and, indeed, often surpass, the other members of the class

What is required is either special individual coaching in the subject or subjects (chiefly reading, arithmetic, and spelling) in which they are backward, or, alternatively, a system of cross-classification, especially in arithmetic. In this case, it is possible for the backward child to work with children of a lower age level for the particular subject in which he is below the average.

It is chiefly, however, with the diagnosis of disability due to some innate defect of intelligence or emotion that we are concerned in this section. Children of this type fall mainly into three groups—

1. Those who are suffering from innate all-round defect of intelligence—with mental ratio approximately between 70 per cent–85 per cent These constitute the real "dull and backward" group.

2. Those whose intelligence is average, or even slightly above average, i.e with a mental ratio ranging from 90 per cent–110 per cent, but who are suffering from some specific defect of attention, perception, or memory, which causes them to fall far behind the average child of their own chronological age in subjects such as reading, arithmetic, and spelling Since these subjects are so closely connected with all the work of the Junior School, disability in any of them has a retarding influence over all the work and tends to make a child appear backward all round.

3. In this group may be classed the children who are emotionally unstable—the neurotic, highly-nervous child, or the apathetic, under-emotional type These children often find themselves up against the discipline of a school; they abhor monotony or drudgery, and quickly earn for themselves the title of lazy, difficult, or naughty children.

Method of Diagnosis

Before a teacher can decide what methods of teaching must be pursued in dealing with a backward child, a thorough diagnosis of his case must be made.

This must be carried out by means of intelligence tests, tests of educational attainment, an inquiry into home circumstances and early personal history, a study of the record of progress from the Infants' School, and an estimate of character and disposition as furnished by the teachers who have come most in contact with the child

A choice of tests lies at the disposal of the investigator. These are of two types, individual and group tests.

(a) *Individual tests.* Undoubtedly an individual test is the more satisfactory for diagnosing the case of the retarded child, since it gives the examiner an opportunity to observe the child at first hand and note many things that would not be revealed by a group test.

The London revision of the Binet-Simon Tests is the most obvious for the purpose. Burt's *Mental and Scholastic Tests* (King), pp. 1 to 128, gives the tests in full, with directions for administering them and methods of scoring

The tests, with norms of performance and methods of scoring, are given also in a small *Handbook of Tests* (Burt).

Since the Binet Tests are rather linguistic in type, and tend to penalise the boy or girl backward in reading, they may be supplemented by some type of performance tests, e.g , *Healy Construction Puzzle Test*, and *Healy Competition Picture Test.*

(b) *Group tests.* For a quick survey of a whole class of backward children, a non-linguistic group test may be given. A careful study of the results of each child's work may reveal some possible cause of retardation, e.g., weak power of perception, or poor memory. The group test also helps the teacher to arrange the class roughly in order of intelligence, so that he may know what to expect of each child, but it cannot be too strongly emphasized that whenever possible the group test should be supplemented by the individual test.

Suitable Non-Verbal Group Tests.

1. *Otis Quick Scoring Mental Ability Test.* Alpha Test ages 7 to 10   Harrap Booklet and Manual

2. *Sleight Non-Verbal Intelligence Test.* Booklet 8d. Handbook 1s. Harrap.

3. *Moray House Picture Test.* U.L.P.

The intelligence tests should be followed by a series of tests of educational attainments Suitable series of tests, together with age scales of performance, may be found in *Mental and Scholastic Tests.* These will be described more fully in the sections dealing with Reading and Arithmetic.

With the data obtained from the various tests, the examiner will probably be able to make a rough diagnosis. The intelligence test will separate those children whose backwardness is due to poor mental ability from those whose backwardness is due to some extraneous cause or to some specific defect of mental function or emotional disposition.

Where backwardness is not due to all-round mental defect, the investigator must make a further research. The child's record of progress and attendance in the Infants' School must be studied in conjunction with information obtained from the parents as to health and any details of personal history that are likely to have affected progress

The examiner may discover from these sources that a child has had frequent absences from school owing to infectious illness, or that a child has attended two or three schools within the period of two or three years when the foundations of the "Tool" subjects are being laid, or, perhaps from a personal interview with the parents, the teacher may discover some hereditary tendency to backwardness in a specific subject, or some imagined tendency which may have affected a child's attitude toward a certain subject.

From an interview with the parents and members of the Care Committee, the examiner will discover something of the social circumstances of the family conditions such as overcrowding, under-nourishment, difficult family relations, all of which may be contributory causes of backwardness.

Finally, from an interview with the child, and from estimates or reports of the teachers,

the examiner will attempt to get some estimate of the child's character and disposition. Poor power of concentration and attention, a tendency to irritability or sullenness, to flightiness or apathy, to haste and inaccuracy, or extreme slowness and deliberation will probably have been revealed during the course of the examination, and will be an indication of the general habit of mind in school work.

The teacher will now be in a position to devise some method of remedial teaching, upon the results of which a further diagnosis can be made. Details of such remedial teaching will be given later.

In attempting to ascertain the cause of backwardness, the teacher will, however, be confronted by the fact that backwardness can rarely be attributed to a single cause. Most commonly it can be traced to a combination of circumstances, such as poor health and malnutrition associated with poor all-round mental ability, or specific defect of some mental function combined with unsuitable school methods, or, finally, some emotional defect which has become exaggerated owing to unsuitable home conditions or unwise treatment in school.

Backwardness in the "Tool" Subjects

The subjects which most concern the teacher who has to deal with backward children are arithmetic, reading, and spelling. These are naturally, in the Junior School, subjects of prime importance, since without them it is impossible for a child to make any substantial progress in other subjects of the curriculum. Suggestions for the treatment of backwardness in these subjects will, therefore, be given in some detail.

From results of tests described above, a teacher will be able to determine whether a child's backwardness is due to poor general ability or to some other more obscure cause, and treatment must be devised accordingly.

The dull and backward children will form the "C" track up the school—if numbers permit of such organization. They must have a special curriculum, in which little emphasis should be laid upon the "3 R's" Suggestions for a suitable curriculum for such children will be made

later. Special methods of teaching the "3 R's" to the other group of backward children are important, since here the teacher can have every hope of raising them from backwardness to a normal standard of attainment

Backwardness in Arithmetic

It has already been stated in this section that there are several distinct groups of children who may be educationally backward. The same classification can be applied to the very real problem of backwardness in arithmetic.

Firstly, there are those children whose backwardness is due to some accidental cause—such as ill-health, absence from school, adverse circumstances in home or school environment. It is easy to see how such conditions might result in backwardness in a subject so dependent on systematic teaching and continuous practice.

Secondly, backwardness may be due to some innate cause, either (a) that of all-round weak mental capacity, or (b) some temperamental weakness and emotional instability which makes the steady practice—the mental application necessary for efficiency in arithmetic—somewhat irksome to them. Such children usually find arithmetic unattractive; they tend to neglect its practice, fail to attend in lessons, and so soon fall behind their classmates

The enormous importance of the correct diagnosis of the causes of backwardness has already been stressed Only by knowing the real causes of backwardness in a particular child—by knowing which are accidental and, therefore, probably removable; which are innate, and can therefore only be modified—can an effective remedial method be devised

Tests. Children who are backward in arithmetic should be given a mental test, the types most suited to children of different ages have already been discussed.

The results of a mental test show whether a child is sub-normal, normal, or super-normal in general intelligence, and enable the teacher to place him in one or other of our two main groups

The next step is to test the arithmetic itself, and for this purpose, a special arithmetic test is essential. It should be carefully graded, dealing

with each process in turn—with problems as well as mechanical arithmetic. Each arithmetical operation must be tested at different levels For example, in addition—simple addition, addition with "carrying," addition of weights, measures, money, and time—must all be tested, just as in subtraction each type of "borrowing" must be isolated. In this way, each child's peculiar weakness in mechanical arithmetic may be revealed—possibly a failure to do problems may exist side by side with skill in mechanical processes.

The standardized tests of arithmetic given in Burt's *Mental and Scholastic Tests* are invaluable preliminary test material. In these, graded tests are devised for every arithmetical process. By means of the table of norms, a teacher can get a rough estimate of a child's performance in each process.

Another valuable—more recently standardized—test is the *Northumberland Arithmetic Test* for children between the ages of 9–14 years This is of great diagnostic value. It consists of seven graded tests—addition, subtraction, multiplication, division, mental arithmetic, rules, and reasoning. A child is allowed seven minutes to work each test. Norms are given to each test, so that by examining results a teacher may learn a great deal about each child's difficulties.

Firstly, she gets an excellent idea of a child's rate of work—a slow worker is frequently an inaccurate worker, and it is necessary to find out the cause of slowness.

Secondly, she will discover whether a child's difficulty lies in mechanical arithmetic as a whole, in one or two processes only, or in problem arithmetic as opposed to mechanical.

Errors and Their Importance Once the field of inquiry is thus narrowed down, a teacher should examine critically the actual errors in computation.

She will find they are of two main types—

1. Errors which occur again and again point to a lack of knowledge, either of a particular process or part of a process, as, for example, a failure to understand "borrowing" in subtraction in special cases such as—

$$\begin{array}{r} 402 \\ 368 \\ \hline \hline \end{array}$$

where a "o" occurs in either line, or—

$$\begin{array}{r} 4,382 \\ 1,392 \\ \hline \hline \end{array}$$

where similar figures have to be subtracted or there is a "9" in the lower line.

Sometimes hazy ideas about notation result in the transposition of figures, and the unit figure is "carried" instead of the ten.

Teachers can devise their own simple tests, but the great advantage of the tests quoted above is that they are standardized, and a child's arithmetic can be compared with that of the normal child and the degree of backwardness measured in each process

2. Errors that appear erratic, which cannot be explained by a simple lack of knowledge—more usually known as "Careless slips"—are more difficult to remedy. These usually indicate in a child that emotional instability which is such a frequent cause of backwardness in arithmetic.

Remedial Methods

A. School Organization.

B. Special Teaching Methods.

A. *School Organization* In the general remarks on backwardness, special classes for backward children have already been advocated. Such classes are intended only for children who are "all-round" backward, that is, of sub-normal general intelligence. Apart from these classes, in a Junior School special organization for arithmetic seems highly desirable, to cater for the great range of attainment found among children of normal intelligence, and also for the temporary set-backs due to absence from school. A system of cross-classification in arithmetic is necessary, whereby children can be grouped for arithmetic irrespective of their grouping for other school subjects.

By this means, a child who has missed work can fill in the gaps in his knowledge, while the one who is slow at arithmetic but good at other subjects need not be penalized on account of weakness in one subject.

Moreover, exercises in group oral arithmetic—so excellent and stimulating at this period—

can be easily arranged for a class of children of fairly equal ability and attainments.

B. *Method of Teaching.* Children are often backward in arithmetic because they have never really memorized effectively the simple number facts, upon which rapid and accurate written work depends.

Tables of addition and multiplication, facts of subtraction and division (especially dividend and remainder), etc, all need frequent systematic practice before accuracy in written work can be expected.

Children backward in mechanical arithmetic need more oral and practical work and less mechanical exercises than are usually given. There is perhaps a tendency among teachers to over-estimate the importance of purely mechanical arithmetic, especially for backward children In any case, the smooth working of a mechanical process is dependent upon "mental" work. Skill in rapid adding, multiplying, subtracting, and dividing is best secured through systematic and intelligent oral work and by the constant use of number games. Lotto, Dominoes, Card Games (particularly "Snap"), Board Games, such as Ludo, Snakes and Ladders, and Race Games are invaluable for giving a child facility in dealing with numbers and learning tables.

It is essential that a child should learn to deal readily with small numbers before he is expected to do written sums of hundreds and thousands. He will then have no use for the numerous mechanical aids and reminders so frequently employed in written work by backward children, such as finger-counting, using dots or strokes, recording carrying figures, crossing out in subtraction, etc. all these practices lengthen the mechanical process and definitely hinder a child from acquiring speed and accuracy.

Need for Temporary Use of the Concrete This does not mean that a child will not need to use concrete material. This is essential, especially for any new process or any difficult idea—as notation Children backward in arithmetic need more frequent help from concrete illustration than normal children.

Modification of Methods—

(a) The all-round mentally dull child should be placed in a special group, with a special curriculum. Arithmetic for these children must, of necessity, differ considerably from that of the normal child.

Written work, especially in purely mechanical arithmetic should be reduced to the minimum, and emphasis laid continually on real problems —actual measurement in relation to the construction of toys, models, money transactions in relation to the school shop All these activities should be recorded and form part of the written arithmetic work. Essential number facts—tables of money, measurement—should be memorized by means of games

(b) The condition of backwardness due to accidental causes, such as absence or illness, is the easiest type to remedy, especially if the condition is uncomplicated by an emotional element.

The important thing is to get a correct diagnosis of the case by examining the child's errors, and then give a little special coaching where necessary.

(c) Backwardness where the chief cause is instability of temperament is often complicated by the development of an active dislike of arithmetic. This makes the problem of treatment a very difficult one.

In such cases an entire change of method is necessary, arithmetic must be approached from a new angle, so that the resistance to the original dislike is broken down. Games, practical work, geometric design, etc., must, for a time, take the place of the ordinary lessons. Later, when these are resumed, sums well within the child's power should be given, to restore confidence and sweep away the old feeling of failure.

Such children are frequently of high intelligence and capable of taking an intelligent interest in their progress by proving their sums and graphing daily results.

Interest of this kind, once it is aroused, will lead them to apply themselves willingly to memorizing of tables and daily practice in mechanical work.

In conclusion, then, it is important that cases of backwardness should be detected early, before the condition is complex, and that the cause should be correctly diagnosed so that a suitable method can be applied

Backwardness in Reading

Although, in the main, backwardness in reading is associated with all-round mental dullness, yet, in a small percentage of cases, approximately 2·5 per cent, the difficulty arises from some other cause.

These causes may be divided roughly into two groups—

A. Backwardness due to some accidental cause to which reference has already been made.

B. Backwardness due to some specific innate cause, e.g. a weakness in perception, memory, or reasoning, or to some innate instability of disposition.

A teacher confronted with one or more cases of backwardness in reading should at once ascertain, if possible, the cause of disability.

Suggestions for diagnosis have been given above.

To assist in the analysis of a child's difficulty in reading, Burt's *Individual Oral Reading Tests* should be given. These comprise—

(a) Monosyllabic Speed Test
(b) A Graded Vocabulary Test
(c) Tests of Comprehension.

A child's score in each of these tests can be compared with the norms given. A teacher will then be able to determine in what particular process in reading the child breaks down.

A study of the Infants' School record of attendance and progress will possibly suggest some reason for the condition.

Accidental Backwardness

Where backwardness is due to some accidental cause, such as frequent or prolonged absence, change of school in the early years, late admission, etc, and a child is of normal intelligence, there should be no great difficulty in helping him to reach the normal standard

Children of 8–9 years are of an age when a certain sense of responsibility for their own progress may be expected, and great use can be made of this by the teacher

A careful study of the reading of these children reveals that their difficulty often lies in the polysyllabic words. This is only natural, since they have missed the greater part of the ground-work in the Infants' School.

Their reading is, as a rule, slow, hesitating, and monotonous, with frequent pauses caused by non-recognition of long words In spite of this, their general intelligence often enables them to gather a fair idea of the meaning of the passage they are reading

A definite course of word analysis will best meet the needs of such children Short, interesting daily lessons should be given. The children must be encouraged to take part in the work, into which a spirit of fun and adventure must be infused Long words should be presented as puzzles, and the children should be made responsible for collecting such words Word books should be made—lists of words entered. The children should spend a few minutes daily in revising these word lists. Occasionally, the teacher should test each child for speed and accuracy. The children should keep their own graphs to indicate improvement In all these ways they may be encouraged to surmount their own difficulties.

Children who have difficulty with word recognition should never read aloud in a class lesson. The practice merely adds to their confusion of mind, and increases their dislike of the subject. Rather should they be provided with easy, interesting books, and encouraged to read as rapidly as possible for enjoyment.

This not only helps to develop a taste for reading, but tends to establish a habit of rhythmic eye-movement—one of the most important factors for fluent reading.

Practice work with more difficult material should be done with the teacher—about ten minutes a day should suffice for this—the main object being to help the child to apply the ideas that he has gained in the word-analysis lessons described above.

The great difficulty for the teacher of children backward in reading lies in the selection of the right reading material Children of Junior School age resent reading from Infants' School primers They need books that deal with ideas on their own level of interest and development.

Since the books that would suit them in ideas are too difficult in vocabulary, the teacher will often have to prepare "hand-made" books for

them. Pages dealing with simple history and geography stories, stories of animal life, nature tales, etc, might be prepared by the teacher, while the children can assist in the work of duplication.

Innate Causes of Backwardness

Where the study of the Infants' School Record does not reveal any "accidental" cause of backwardness, the teacher's problem is more difficult As has been indicated, some defect of mental function, apart from low general intelligence, may be at the root of backwardness This is always more difficult to discover and to remedy.

The most frequent cause of failure in the earliest stages is a weakness in perception for word forms. Children who suffer from this disability find it difficult to discriminate slight differences in the form of letters and words. They confuse "b" and "d," "p" and "b," "m" and "n", they read "bad" as "dad," "big" as "dig"; transpose letters and read "no" as "on," "saw" as "was," and so forth Naturally this failure to discriminate in the first instance affects memory, and these children learn very slowly and inaccurately.

But apart from this there is often a specific defect in some form of memory, e.g poor visual or poor auditory memory. Defect in "auditory" memory seems to be frequently associated with disability in reading. This weakness is often revealed by the auditory memory tests of the "Binet" Scale, and a study of school work will show that these children have difficulty in memorizing poetry and are weak in music. indeed, they are often unable to sing a simple tune.

The prevalence of "phonic" methods of teaching reading naturally tends to accentuate the difficulty, for children of this type find it difficult to remember the phonic values of letters, they cannot combine sounds together, nor analyse even a simple word into its component sounds, they therefore break down in the very earliest stages of the work and soon become hopelessly discouraged.

At a later stage, some children show what appears to be an inherent inability to analyse longer words into syllables, although it is pos-

sible that the same weakness lies at the source of both these difficulties Older backward readers sometimes surmount the first stage and learn to read simple monosyllabic words, but never gain the power to tackle longer words.

Finally, there are children whose chief difficulty is with "comprehension." In the main, these will be the children of poor general intelligence—since comprehension and reasoning ability go hand in hand—but occasionally the intelligence test reveals normal ability, and the reason for failure must be looked for elsewhere A physical defect may sometimes be discovered, e.g adenoids, or deafness, or some defect of speech, which prevents the child from articulating clearly, and, therefore, affects the inner speech and hearing which play so great a part in the interpretation of meaning

On the other hand, failure in comprehension may be associated with lack of interest. This may be due to some accidental cause, e.g malnutrition, producing a general lack of zest, or a home environment in which no value is placed upon books or reading, or a lack of adjustment to school conditions. In the last circumstance, although the "mechanics" is learned, the child's heart is not in the work, and the reading is of a purely mechanical quality.

Remedial methods for all types of backward readers must be based upon their special difficulty If a child has been entirely unsuccessful throughout his Infants' School course, it would probably be a good plan to change the method of teaching.

Children who have made no progress with a "phonic" method might make a new and interesting start with a method that makes use of a "whole" idea as a unit, e.g. the Sentence Method, or the Word Whole and Sentence Method.

For instance, objects can be labelled, and simple written directions given, which the children first read silently and then perform, e g. the children can first learn the names of objects in the room by placing labels upon them. The teacher will next teach through activity a few words, e g *stand*, *find*, *bring* Next, she will write on the blackboard simple commands, e.g. "Stand by the cupboard," "Bring a red book," "Find a white flower," etc. When a collection

of these sentences has been learnt, hectographed sheets on similar lines can be prepared, and the children can build up their own reading book.

As a rule this new mode of approach arouses great enthusiasm, and the children begin to make progress. The fact that reading is associated with fun and activity gives them a different attitude toward a subject which has previously been viewed with distaste.

At a little later stage, some interest or project in the classroom can form the basis of the reading work. Nature study, primitive life history, and geography lessons based on "Children of Other Lands," can form the subject of various reading pages. In this way, the children will acquire a little set of reading books for which they feel real affection and interest, and over which they may often be seen poring in odd moments.

For the younger backward children, individual occupations should be prepared. A verse of a poem with which the children are already familiar can be printed on a card, and a second copy, cut in separate words or phrases, prepared. The child builds up the verse of poetry from the copy. Quick recognition of individual words should follow the completed exercise. Later, the child builds up the poem without the aid of the copy.

Boxes of loose words may also be supplied, and the children can make their own sentences, transcribe them into books, and illustrate the idea, e.g —

This is my boat.
It is blue and red.
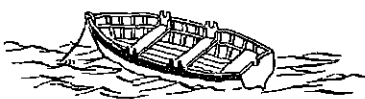
The red ball is on the table.
The blue ball is under it.
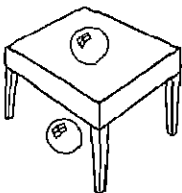
FIG. 1

Group games, e.g. word snap and word lotto can also be introduced; these give practice in rapid recognition of isolated words, and, for younger children, are much better than tedious repetition lessons.

For children who are poor in comprehension, fairly easy and interesting books must be supplied, the children must be encouraged to discuss the books they read, occasionally they might make illustrations of different scenes in the story, and write a short description of it in their exercise books. These illustrations will often reveal the extent to which they have grasped the ideas

Alternatively, the teacher may give the children a set of questions to answer These should not involve a mere copying out of the text, but should be so framed as to lead the child to reflect upon what he has read.

Backwardness in Spelling

In many cases, backwardness in spelling is associated with backwardness in reading, and improvement in the one is accompanied by improvement in the other

There are, however, a few instances of good readers who are bad spellers, which a teacher may meet in the course of her experience

The same general procedure in treatment should be adopted as in backwardness in reading and arithmetic The child should be given tests in spelling, and his errors examined to discover the extent of his backwardness and the quality of his errors

In Burt's *Mental and Scholastic Tests*, page 287, *et seq*, list material for spelling is given, also, a valuable list of types of errors to be expected (page 291) with reasons for each error suggested

From the detailed analysis of errors given in these pages, a teacher will be able to devise special methods for special cases, but a few suggestions for the general treatment of backwardness in spelling will be made here—

1. Spelling is needed for written work only, and should, therefore, always be practised in close relation to writing—composition rather than dictation; in fact, writing a word should be one of the most usual methods of memorizing its spelling

2. As writing is a muscular habit, it is important to avoid, as far as possible, the incorrect writing of words

For this reason, dictation should always be prepared, and should consist of simple words and phrases—not unusual and difficult words.

Also, children should be encouraged to use dictionaries, or be free to ask how to spell the words they need in their compositions.

It is important to get the correct spelling of words into a child's hand, as it were, not only into his auditory memory.

3 Systematic word analysis, word games, making collections of words in word books, writing labels for models, maps, etc., all are more valuable means of producing good spellers than the old-fashioned sing-song repetition of lists of spellings.

Words so learned should be combined into sentences or used in composition by the child. This is a more valuable exercise than the mere writing of lists of spellings, since it is based on a sound psychological principle—that it is necessary to memorize material in direct relation to the purpose for which it is required.

The Special Class for Dull, Retarded Children

So far we have dealt only with children whose backwardness is due either to some accidental cause or to some specific defect. The question of curriculum and method for the dull and backward child will now be considered

These children, whose mental ratio ranges from 70–85 per cent, need a special class time-table and curriculum, while methods of teaching need to be specifically adapted to them.

In the first place, the size of the class must be relatively small The Primary School Report suggests 30 as a suitable number, and this should be regarded as a maximum number, since much of the teaching must of necessity be of an individual nature.

As far as possible work should be done in the open air, since poor physical health, malnutrition, and overcrowding in the home frequently accompany and, indeed, contribute to the lack of "pep" and energy characteristic of the backward child.

The Classroom. The classroom should be light and sunny, and special care should be taken in the furnishing and decoration of the room

The children can take an active share in the work of decoration; jars can be painted and ornamented with simple patterns, coloured cloths and curtains can be made for tables and the fronts of shelves; friezes and panels for the walls can be made in paper-cuttings.

Since much of the work is to be of a practical nature, tables and chairs are preferable to heavy desks Tables can be grouped together, chairs piled up, when floor space is needed, for either constructive or dramatic work In addition to the tables, there should be at least one wood-work bench and a rack for tools, containing hammers, saws, fretsaws, screwdrivers, bradawls, and drill. If possible, a sink with running water, and a gas ring should form part of the equipment of the room.

Along one wall there should be a broad shelf of suitable height, to hold the children's collections, Nature specimens, etc. Below this shelf arrangements could be made for lockers to hold the children's individual possessions, since the possession of things of their own is conducive to the development of independence and a feeling of self-respect

The children must be made responsible for the care of their room, each child being assigned a special duty, such as the care of the flowers, tidiness of cupboards, changing calendar, etc.

The Teacher of the Backward Class The choice of teacher for the backward class needs very careful consideration on the part of the head teacher. From the point of view of personality, such a teacher should be cheerful, optimistic, and really sympathetic. She should have the power of observing each child and of skilfully encouraging him to put out his fullest efforts.

Above all, she needs the ability to discern in which direction he can excel, since this must always be the starting point of his education. Patience and persistent and vigorous encouragement are essential to overcome the natural apathy of mind of so many retarded children.

Secondly, a teacher of a backward class undoubtedly needs special preparation

In addition to the general course of psychology taken by all teachers as part of their training, a special study of the psychology of the retarded child is essential—to ensure an

under standing of the peculiarities of his temperamental, as well as his mental, disposition. Such a teacher needs, too, a knowledge of the many special methods of teaching reading and arithmetic; also a wide knowledge of handwork of all kinds is desirable.

Lastly, the teacher of the backward children must envisage very clearly the aim of her work with them. Her interest should be in the growth and development of their minds—not in the mere academic results they produce.

She should measure the value and success of her efforts in terms of the children's increased power and interest in their work, not by the ordinary standards of the work of normal children.

Naturally, backward children must learn to read, write, spell, and do arithmetic, and they must have some knowledge of history, geography, and Nature study. The important thing is that such work must be done in the manner best suited to them. In particular must their method of approach to the "Tool" subjects be different from that usually adopted for the normal Junior School child.

Naming the Backward Class

Another matter needing very careful consideration is the name given to the retarded class. It is most important to avoid as far as possible any name that may arouse in the children a sense of inferiority, peculiarity, or isolation from the rest of the school.

Often in the Senior School such classes are called "Special Opportunity Classes" or "The Practical Room," according to the activities specially emphasized in their curricula.

On the whole, for the Junior backward class it seems better for it to be numbered as one—say the middle—of the series of classes.

Then, too, most Junior Schools have some kind of "House" System in operation, in which children are drawn from each class to form the different "Houses." By this means the retarded children would be closely associated with the other children, and by excelling in games, dramatic work, and handwork could have the satisfaction of bringing credit to their "House."

The Curriculum and Time-table for the Backward Class

The modern trend of the Primary School is to make the curriculum for children from 5 to 11 years a much more active one.

If this is right for the child of average or superior ability, it is an even greater necessity for the slow and retarded child. These children must learn through activity and experimentation, rather than by means of ideas, imparted by the teacher, in which the child is a passive recipient.

A proportion of each school day must of necessity be given to work in the tool subjects—i.e. to reading, writing and arithmetic. From one hour to one hour and a half should be devoted to group and individual work in these subjects

The usual practice is to give a good part of each morning session to work in the three R's, the rest of the day being devoted to the usual school subjects, such as history, geography, English, nature, music, handwork, and physical training.

A totally different approach to the curriculum and a much more elastic time-table for these backward children would most certainly produce far better results, for the backward children are frequently inert and listless at the beginning of the day. What they need is some form of work or occupation that will arouse them from their lethargy and stimulate their interest and power of concentration.

Activity Work

It is suggested then that the first part of the morning session should be given to activity work. This may be of two types—

(a) Self chosen work on two or three mornings of the week This self chosen work could be drawing or painting, constructive work, including clay modelling, gardening, games and puzzles involving elements of number, form or language, or dramatic work such as puppetry.

(b) Directed activity work On the remaining mornings of the week the children should be engaged in some form of directed co-operative activity.

In the most advanced of the "Free Activity" schools the children are left entirely free to select the ideas for their activity work. Thus within one class one might see a group making puppets and preparing a puppet play, while another group might be occupied in making a cinema and rolls of films, a third in setting up a market of stalls, and a fourth in constructing a railway

In the course of several years of this type of free active work, the advocates of the plan expect that the children will have covered much of the ground and acquired most of the ideas that are usually taught by means of the more formal syllabuses in history, geography, English, nature, elementary science, and so forth

This freely chosen activity plan is still too much in its infancy, i.e. in the experimental stage, for teachers to be certain of its success, but it is worth while giving it a reasonable time for trial

The success of the plan will depend upon several factors—

1. The intelligence, vigour, and enterprise of the children

2. The skill, enthusiasm and understanding of the teacher; for it must be understood that it is not an easy option from definite teaching. The teacher must be on the alert to offer suggestions either unobtrusively or directly for the development of a child's activity, so that work that has begun more or less on a *play* level may be lifted to a higher plane of thought than would normally be the case with a group of children working entirely on their own initiative

3. Upon suitable equipment in the form of classroom libraries of simple reference books, and informative reading books, material of varied kinds, suitable tools, and above all upon *space* for carrying out quite extensive pieces of work

The average junior child of 7 to 10 years is full of energy and ideas. His interests are wide and he can readily select *projects* for his activity, although not all of these projects are of equal value for his mental development.

This is the true meaning of the term *project*. It is an enterprise undertaken freely by the children and carried through independently by them. The teacher acts as the friendly observer and adviser, willing to put his or her skill and knowledge at the service of the children

In theory there is no reason at all why the plan should not succeed; in practice it often fails Final results are often patchy and the standard of craftsmanship, technique, and knowledge on a low level. Nor is this to be wondered at since without adequate guidance from the informed and mature mind of the teacher, it is hardly to be expected that the immature child can reach the standard of development of which he is really *capable* but of which necessarily he is *ignorant*.

If this is true of the child of average or superior ability it is more true of the backward child, who lacks energy and enterprise and the driving power of an intelligent mind.

For these children the free activity periods should be supplemented by study under the teacher's guidance of suggested Centres of Interest, centres selected by the teacher because he knows that when once the children have engaged on them, they will undoubtedly make a strong appeal to interest and effort.

A Centre of Interest

How then may a Centre of Interest arise?

Let us imagine that a class of Backward children of 8 to 10 years have during their free activity periods worked out some of these ideas—a shop, fun fair, market stall, railway. The teacher observing these activities might propose that the whole class should combine to work out a shopping centre, either a street of shops or a covered or open market according to the area in which the children live

The teacher's proposal is usually welcomed, since when once the novelty of choosing your own activity and working just as you like at it, has worn off, the majority of children prefer to have someone directing and guiding their work

Their concept of a school—although they might not be able to put this into words — is a place where you come to learn something, although pleasure, in learning something that

seems to the child to be worth-while, is naturally appreciated.

When the proposal has been accepted, a plan of work will be discussed

These class discussions will provide an opportunity for all the oral composition that is required—oral composition as a subject will not be needed on the time-table, for both the ideas and the vivid language in which to clothe them will flow in profusion from the discussions.

Following the discussions, groups of children may be assigned or may choose to undertake, the responsibility for some part of the work For example, if a shopping centre has been chosen, each group will undertake to find out as much as possible about a particular shop—its general arrangement, the goods sold, how they are sold, and the price of the goods This will involve out-of-door work, which may, if the children are old enough, be done independently in or out of school hours.

Making Shops

In the classroom a plan for construction must be evolved. Construction should be on as large a scale as possible and if the classroom permits, might occupy the whole side of the room.

All kinds of waste material must be collected, e.g. pieces of wood, boxes of differing sizes, card, tins, cartons, nails, string, etc , while the school will supply paint, paper, clay, and any other really essential material, that the children cannot collect for themselves.

The actual construction of a shop in which a child can stand and serve, even if it is not quite like a real shop, should not be beyond the capacity of a child of 8 to 10 years, since such work is often done by children of 6½ to 7½ in an Infants' School

Making or providing the stock for the shops comes next, and while the best method of making the goods is discussed and later carried out, very interesting work in spelling, reading and number will arise. This will supplement and vivify the routine work that is being done at other times of the day. (See below.)

For each shop a price list of goods must be

prepared (spelling, reading, number), while from the discussion as to how goods are sold will come practical work in weights and measurement. If, as is desirable with backward children, real shopping activity takes place, cardboard money or tokens to represent money must be made; this work will provide an opportunity to systematize the children's knowledge of the money table

Nor is this all, for the teacher who has in mind the development from this interest to a higher plane of mental activity, will lead the children to wonder and to ask questions about the goods in the shops, how and from where we get them (the beginnings of geography); of what they are made and how they are made (beginnings of science); where things grow and how they grow (geography and nature), what people used or had or ate in by-gone days (beginnings of the history of everyday things).

It can be seen, then, that under the guidance of the teacher and in a quite informal manner, much useful knowledge can be acquired from such a centre of interest.

Keeping Records

Further, since it is interesting to the children, why should they not keep a record of it, so that perhaps in six months' or a year's time, they can look back at the record and refresh their minds about what they did (the beginnings of written history) !

In this way the motive for individual records and for a co-operative class record arises.

Each child should keep his own record book At first this will consist largely of drawings, accompanied by a few short sentences, but gradually as ideas develop, so will the power of written expression, since the child who really has something to say is never at a loss for a mode of expressing it, even though there may be inaccuracies of spelling and grammar.

The class record book would contain illustrations, collected by teacher and children, that bear on the topic, together with interesting drawings and writing from each member of the class.
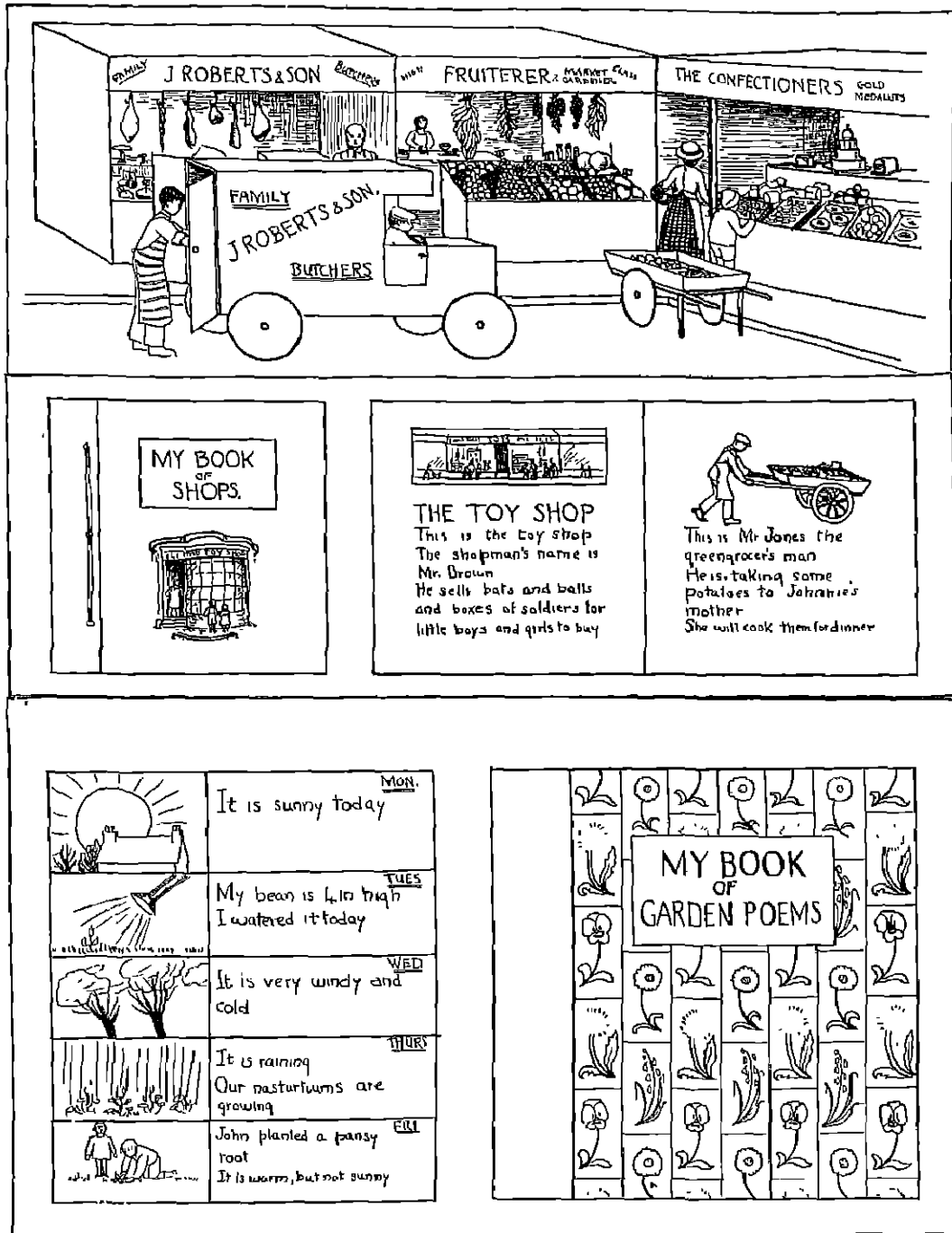
FIG. 2

Handwork arising out of Projects

Extending the Centre of Interest

The enthusiasm and interest aroused by such a simple piece of work as this, might astonish teachers who think that the dull child cannot be interested in his school work What will be of special interest to a teacher who has started by giving two or three periods of entirely free work, will be the fact that, as time goes on, the work arising from the centre of interest occupies more and more of the free chosen times: what has started as directed work is now pursued voluntarily

From a simple study such as shops, a new study might easily develop, for after all shops are only a part of the life of a community.

A Neighbourhood Study

With the school as the central point a *neighbourhood* study might emerge

Again construction should lead the way. The children should make a plan of the area surrounding the school. Then, according to the area in which the school is situated, some or all of these features will be included—houses, shops, church, chapel, bank, police station, post-office, fire station, cinema, inn or public house, garage, town or village hall.

The children and teacher will go out together with pencils and paper to make rough plans and study buildings, with the idea of reproducing all this in the classroom

Back in the classroom a rough plan will be set out on a large ground sheet (hessian, canvas, cardboard, or even large sheets of rough brown paper), to show the position of the school and the roads surrounding it and the position of the principal buildings.

Working in groups the children will construct small models of different objects, e.g. a street of houses or shops, the church, fire station, etc When all the parts are finished, they will be assembled into a whole on the ground sheet

From this new piece of construction a whole series of interesting discussions will come, for example, the work done by different people who serve the community—the postman, policeman, bus driver and conductor, dustman, etc. At this stage it is a good plan to invite some of these workers to come into the classroom to tell the children at first hand of the work that they do, and thus to bring home to the children the important part that each of these workers plays in their community.

New record books, and a new vocabulary of spellings will come as a result of this study and fresh ideas relating to geography and history, e.g the story of the post and postage stamps, the telegraph, the telephone, the history of the policeman and the fireman, the history of their own school, of the church or chapel, and so forth.

The Time-table

Enough has been said to show that the activity method, rightly interpreted, is the only method that is likely to be successful with the retarded child.

It has also been indicated that all the history and geography that these children need can be covered through the medium of the centre of interest. Again there will be no need for additional lessons in oral or written composition, since the children will be learning to express themselves in speech and writing at different times of the day, about some aspect of the work they have in hand.

What, then, is left to complete a time-table for the backward child? He must have story and verse—a story every day is to be desired for these children and this should not overtax a well-read teacher's repertory. A limited amount of verse—verse that presents, in a simple way, clear-out images, or verse that makes a strong rhythmic appeal—is also desirable. Both story and verse will provide motives for dramatic work and puppetry, a particularly valuable means of expression for these children.

Seasonal Nature Studies

If the centres of interest do not include a seasonal study of nature, then this topic must have its place on the time-table. Nature and weather records should be made and a seasonal nature table kept in the classroom. Nature walks to the parks or open spaces are important for town children, since they need to be taught to observe and record the changes of the

seasons : e.g. the flowers of spring, the opening buds, the flowers of summer, autumn tints, and the bare but beautiful trees of winter; the habits and the song of the common birds, the ways of insects

This work, too, should be as informal as possible. In the classroom, observations may be discussed and records made in individual nature diaries.

If it is possible these children should also have garden plots, where they may plant seeds and watch their development.

Conclusion

If the morning session has been given largely to activity work, then the first part of the afternoon may well be devoted to group and individual work in the three R's. Teachers will find that the children come to this work with vigour, interest and energy—energy that has been released by the active work of the morning.

Finally these children need more games and physical exercise than the average child. Games out of doors and games in the classroom should find their place on the time-table.

We may best conclude by a summary for the backward child contained in a quotation from the Primary School Report.

In every branch of the curriculum, and at every stage, the problems and the tasks that are put before the child should be well within his powers, and yet sufficient to evoke some mental effort. Instead of feeling that he is the dunce of his class, failing every day at whatever task he is given, he should experience the joy of successful work and the satisfaction of something achieved If the product of the child's work is not only a visible, well-finished job, but an embodiment of his own simple creative and aesthetic tastes, his character as well as his intelligence will be simultaneously trained.

LIST OF BOOKS HELPFUL TO TEACHERS AND CHILDREN

TEACHERS

Actuality in School. Cons and Fletcher, Methuen.

The New Era in the Junior School· Warr, Methuen.

Junior School Community, Atkinson, Longmans Green and Co.

CHILDREN

The Everyday Books· published by Dent.

The Baker, Farmer, Milkman, Policeman, Postman, Engine Driver, Fireman.

The Shown to the Children Series : Nelson. Buds, Beasts, Farm, Ships, Railways, etc.

The Story Book Series : Winston Co., Toronto. Houses, Transport, Clothes, Food.

Book of Shops : Hume and Wheeler, Evans.

Good Story Readers. Hume, Philip and Sons, Ltd.

The Happy Way (Transition Reader) : Hume, Blackie and Son.

HANDWORK POSSIBILITIES FOR RURAL SCHOOLS

GENERAL PRINCIPLES

IN our modern schemes of work, handwork will occupy a much more important place in the school curriculum than it ever has in the past. In both town and rural schools, craftwork will be more developed, and a systematic scheme will be followed throughout the Junior School and on into the Secondary School.

The Rural Child

In rural schools the difficulties are many and various, and these present problems not only to the young teacher but to the experienced one also. The outlook and environment of country children even in these days of quick locomotion is quite distinct from that of the town child. Many country children know of a factory, foundry, or shipyard by name only; their only ideas of them are obtained from pictures. The roar of machinery and the glare of blast furnaces is as much a myth to them as the sound of the wind in the willows or the early morning clatter of a farmyard is to a town child. The children of rural Britain live much closer to mother Nature. To them is allowed a "close up" of the habits of bird, animal, and insect, an intimate acquaintance with the great push in the Spring and the dying down in the Autumn. These joys a town child, as long as he remains in the town, can never know. But the town child sees the construction of mighty buildings and bridges and can easily visit museums, art galleries, libraries, etc.; his is a world of people and things.

Owing to the isolation of many rural homes, the children, who rarely meet strangers, become far more shy and reserved than the average town child. This shyness is often mistaken for ignorance, and the problem of overcoming this trait is a very real one. Teachers will find that handwork of any kind comes as a specific means of breaking down that shyness, of "bringing out" these children, and developing their belief in their own powers. When they find they can do things, self-assurance grows, and from the ability to do grows the power to tell, write, and discuss. It will be noticed that rural children can explain how they made some thing, or performed some task, much more readily than they can answer ordinary school questioning on, say, history or geography.

Again, the home influence of our rural children is very conservative in the main, the weather, its effect on the crops, market prices of commodities to be bought and sold, and local happenings in the village and immediate neighbourhood seem to be sufficient for the average farm labourer of to-day. In many areas this outlook is broadening, but these things move slowly and are most certainly reflected in the minds of the children. The teacher must take and deal with this outlook with its possibilities, limited no doubt in many respects, yet offering a wide field of work full of adventure and experience for both teacher and taught.

It would seem, then, that the form of attack in the rural areas must take a far different line from that in our towns. "A humane or liberal education is not given by books alone" (Hadow Report), and each teacher will have to work out a policy influenced by local conditions. Many will break new ground, others will adapt and improve existing facilities for practical work, but behind all must be the spirit of a new era in education, which, in many instances, can express itself only by breaking away from traditional methods.

The Town Child

It may be noted that a judicious selection from the following models and projects might be used in connection with geography lessons for older juniors in town schools, for they will give them an intimate knowledge of British country life. To save time in school, the teacher

might demonstrate the making of such models in school, and let the children make them at home.

Equipment

It is unfortunate that many of the rural schools are sparsely equipped for handwork: floor and yard space is often small, while cupboards and storing room, too, are very inadequate Doubtless in time all these deficiencies will be made good At the moment it is for the teachers to make the best use of what is available. Temporary cupboards of packing-cases will house a good deal of handwork apparatus, while an efficient scheme of Junior handwork can be executed on school desks or tables A piece of cardboard, newspapers, or large thick magazines should be used to protect the desks. The school yard might be put to more use than is usually the case for drawings and plans The cost of equipment seems to have been a stumbling block in the past to many rural teachers. Much, however, can be done with even scissors, knives, rulers, bodkins, needles, etc Teachers are often afraid to make a start with what they already have, and one of the biggest problems is the difficulty of the staff to "get going" Handwork is essentially a subject one must "learn by doing." It is very rarely, however, that no single craft will appeal to the teacher, and usually when once a start has been made other crafts follow in a natural sequence With a first-rate teacher keen on craftwork scarcely anything can come amiss, and such a one can keep a fair-sized class busy on several crafts

The Scheme

The whole question of the amount of time to be devoted to this subject must depend on local circumstances, the type of school, the type of scholar, as well as the qualifications of the teaching staff

The scheme here suggested is essentially one suited to rural schools in particular, and, while there is no reason why any type of handwork should not be attempted in rural areas, it would seem that those things near at hand and seen every day by the children should come more easily to them. In the garden, on the farm, and

in the field will be found ample scope for ideas, and wide and interesting scope for many aspects of handwork

An Industries Chart

Rural children are often inclined to think that all rural areas are similar to that in which they themselves live, and that all rural folk must perform the same tasks as those in their own village.

For older juniors of 10 to 11, a study of rural work makes an interesting and instructive scheme. If possible, a beginning should be made with that occupation in and nearest to their own homes. Models and cut-outs might be done in the handwork lesson It seems most necessary to the teaching of handwork that children should realize and be interested in what the older people do with their hands, not only in their own immediate neighbourhood, but in villages farther afield.

Various ways of showing rural industries on a chart or map will suggest themselves to the teacher, a brief list only is given here.

Cropping—	Rural Industries—
Garden produce—market gardening.	Clay working
	Quarrying.
Orchards	Mining.
Hop fields.	Basket making.
Peas.	Cider making.
Strawberries	Charcoal burning.
Teasles.	Turf cutting
Watercress	Hurdle making.
Willows for baskets	Cheese and butter
Sugar beet.	making.
Haymaking.	Weaving.

Materials and Tools

1. *Paper* White cartridge paper, old used exercise books, art tinted paper, packing paper, corrugated packing paper, tissue and newspaper, all have their respective uses. Paper pulp pressed into moulds and allowed to assume their shape is used for models in "the round."

2 *Cardboard.* Complete models may be made of this medium.

3 *Metal* Tin, sheet copper (thin), or sheet pewter (thin), may all be cut with strong scissors, and if pierced with a fine awl or strong darning

needle mounted in a wooden pen holder can be nailed with fine "pewter" nails or "panel" pins.

4. *Wire.* Thin binding wire sold on reels or in rolls, thicker stemming wire as used by florists, and a stronger thicker wire about $\frac{1}{16}$ in. thick.

5. *Paste or Glue.* Flour-and-water paste to which a little size has been added is a cheap paste for sticking large surfaces and for the making of papier mâché bowls. Higgin's vegetable glue and gloy are good for cardboard, etc.

6. *Other Necessities* Fine twine, paper fasteners, an old wallpaper book, coloured tissue paper, tape, pieces of celluloid or mica for windows, paints, brushes, a few pairs of compasses, hammers, knives, a drill with various bits, a pair of pliers, and pairs of strong scissors make a good list on which to begin. It is not necessary for each child to be supplied with all these tools: only a few of each are needed for a class, except scissors, knives, and rulers, and these are already part of the general equipment of most schools.

WEATHER CHARTS

In country districts folk are more at the mercy of the "clerk of the weather" than their neighbours in the town. Children, following in the steps of their parents, often make a detailed study of wind and cloud. Even the youngest child can always be relied upon to pass some observation on the weather. To rural children the weather means so much, probably comfort or discomfort for the whole day at school. It is no wonder, then, that they learn to read from wind, cloud, stars, sunrise, and sunset, and know that—

> *Fog on the hill, water to the mill.*
> *Fog in the hollow, fine day to follow.*

The smallest children in our rural schools are able definitely to record the weather each day. Even though they can neither read nor write, they can "record" by signs. A revolving chart can be moved each day to correspond with the prevailing weather. A "sun" in orange paper can indicate a fine day, a grey ragged paper a cloudy day, and an umbrella a rainy day. These 3 signs are ample for 6–7 year-olds. A corresponding sign is affixed to a month calendar, and each morning a child takes a cut-out "sun," "cloud," or "umbrella" from a box which is kept handy. Small children will do this day by day without any aid or direction from the teacher.

For 7–8 year-olds, the idea can be developed by a larger revolving chart showing fog, wind, storm, heat, cold, frost, snow, as well as sun, cloud, and rain. In this case small illustrations might be used on the revolving chart, and appro-

priate signs on the monthly one The making of these signs will make a good communal handwork lesson. The 9- and 10-year-olds might add temperature and barometer charts, all paving the way for official rain recording and temperature charts, map making, etc., that are taken in the Senior Schools Thus the whole scheme is continuous and progressive.

The charts are made in the following ways—

Chart for 6- to 7-year-olds.

Three signs—sun cloud, and rain. A piece of cardboard 1 ft square has a 6 in. semicircle cut out at the foot A circle of cardboard of 9 in. diameter is fastened behind the large card with a paper fastener through the centre, allowing the circular piece to revolve The circular piece should be divided into three sections on each of which is fixed a "cut-out" sign representing sun (orange circle), cloud (grey irregularly torn paper), and rain (black cut-out paper umbrella) It will be seen that as the circular card is revolved only one of the signs is shown at a time For the monthly calendar a similar-sized card is divided up into days, and a corresponding sign attached each day

Chart for 7- to 8-year-olds.

A similar-sized card is again necessary, but only a small section should be cut out (Fig 1).

The circular revolving card should be divided into sections, and the cut-out section in the front card should exactly correspond in size to the section in the circle, so that only one section

is visible at once. The signs can be either cut-outs or pictures painted on the card—crayon is
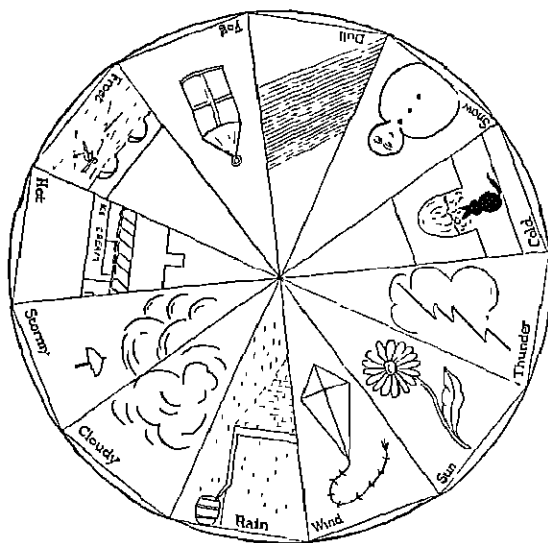
Fig. 1

Weather Chart for 7–8-year-olds

rather unsatisfactory. A typical list is given, but many ideas will occur to both teacher and children : each term might see a new chart.

Wind. An umbrella blown inside out, or a kite

Stormy. Two children standing under a tree with a dog—rain falling.

Cold Fireplace, fire, child, and a cat

Heat. Cows (cut out) standing in a pool, or parasol and sun bonnet, or an ice-cream shop.

Rain Rain-water barrel and roof with rain falling, or sou'wester and gum boots

Snow. Snow man and snowballing, or sheep in the snow, and trees.

Frost Icicles in white paper, or skates and gloves, or skating or sliding scene.

Fog Ditch and willow trees in fog, or lantern (hurricane).

Cloud Clouds cut out or painted.

Sun. Large sunflower (yellow).

Thundery. Cloud with forked lightning

Dull Fine lines drawn obliquely across.

All these signs must be simple enough to allow a child to draw and, if necessary, colour them himself.

RURAL CRAFTS

Rush Seating

The elder children of a Junior School should be able to attempt seating in rush or string. Old stools or chairs brought from cottages can be reseated with binding twine, i e. the twine used by harvesters for tying sheaves of wheat, ordinary coarse string, webbing, or sea grass.

Take the end of the rush and tie round the front seat rail. The rush should then be taken across to the opposite back rail, passing first under then over the rail, keeping the rush close to the corner of the seat. Next, pass the rush under and over the left-hand side of the seat, and across to the opposite side, still taking the rush under and over the seat rail (see Fig. 2). Take the rush to the opposite side, going under and over the tail in each instance, and always remembering to keep the rush or string taut , each strand, as it passes over the chair rail, must lie very close to its neighbour, and at the corners the strands must lie at right-angles. When joining the rush or string, a reef knot

should be used, and this should lie on the under-side of the seat and be kept as neat as possible. (A reef knot is made by passing the left-hand end over the right, then the right-hand end over the left, making a flat, strong knot)

When two or three inches have been done, a small pocket will be noticed between the upper and lower strands ends of rush, etc , should be packed into the gaps , this will tend to give the work a firmer look, as well as increasing the

Fig 2

Method of Weaving

Corner Construction

Centre Construction

Rush Seating
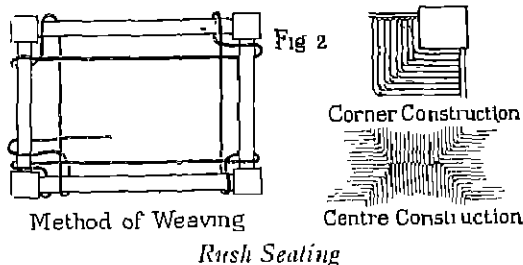
strength of the seat. Should the stool or chair be oblong in shape, the shorter sides will be

filled in first. The rush or string must then be woven over the longer sides in a "figure 8" until these sides also have been filled in To finish off the weave, tie the rush on the underside and weave in the end. Coloured rushes may be used if desired, for a pattern or whole seat.

Vellum Work

Candle shades and lamp shades, both for electric light and oil lamps, can be cheaply and effectively made of vellum. As a craft this affords a good exercise in drawing, design, and colour Before beginning any model which is curved, however, one or two flat articles should be attempted, e.g book-marker, book cover, blotter, or calendar

Materials Required. Vellum natural coloured, drawing paper, pens, and indian ink—both black and a few good colours.

A young class might begin with calendars and book-markers, then might follow blotters, book covers, and lastly shades and coverings for boxes, writing of mottoes and lettering. Like leatherwork, vellum decoration is one of the beautiful crafts, and is capable of arousing the love of the beautiful which is inherent in every child and which, even if latent, should receive all possible encouragement.

The Design. Much has been said and written on design for young children, and it certainly belongs to the art lesson, yet in many forms of craftwork design in colour decoration is needed.

Most children lack experience in this work, and it should be regarded as an essential part of the course. The design should first be carefully drawn on paper ; then, if the lines are strongly shown, they will show through the vellum when placed over the design The design should then be carefully traced with a light pencil line. When the child has decided on the colours to be used, the outlines should be first drawn with a medium pen. When dry the washes may be applied with an ordinary paint brush. A little water added to the ink will "dilute" the colour. Effective work may be achieved with the use of black and neutral coloured inks This gives a "silhouette" effect and may well form an introductory exercise. The application of gold leaf and the raising of the design with paste should be left for Seniors Book covers, blotters, calendars, and school mottoes may be finished by either binding the edges or thonging them with fine leather thonging, thin silk cord, or raffia, of the predominating colour in the design or black. The holes punched for thonging vellum should be further from the edge than in leatherwork, or the vellum will tear away The holes should be regularly spaced and marked before any punching is begun

Shades. For both candle and lamp shades a frame is necessary. The vellum must be cut to fit the frame and the design applied in the usual way and coloured, and the vellum thonged to the frame. For Junior work only the more simply shaped shades should be attempted.

HANDWORK IN RELATION TO GARDENING

Although actual work in a garden must be very limited in the life of younger children, many instructive and interesting lessons can be given actually in the garden. All heavy work must be avoided or left to the Seniors, but little ones can do something.

Planting

Bulbs. These, of course, can be grown both indoors and outdoors. (See Nature Study.)

Annuals planted in boxes (the soil being previously sifted) or pots could be used for the garden, or in the case of some varieties, e.g. mignonette, candytuft, clarkia, dwarf nastur-

tium, marigold, for pots for the classroom. When the seedlings are large enough to be transplanted this could be done by the little ones. Annuals planted by Juniors would make an effective border or bed. The planning and arranging of this, which should first of all be done on paper, makes a good exercise in colour scheming and arrangement according to height and time of flowering.

A well-arranged bed when in blossom makes a fine place for the study not only of plants and flowers, but also of butterflies and bees, and provides a wealth of cut flowers for the classroom. A waste piece of ground was once

allotted to an Infants' class who scattered Shirley poppy seeds thereon. Much could be written of the "ladies in coloured print frocks" who lived all that summer in the neglected corner of the garden, and of the delight of the babies as they watched, admired, gathered, and arranged their poppies. So much was done with so little.

Propagation by cuttings with pinks, carnations, and violas is easily done by small children.

Rockery Making

Fairly large stones should be avoided, but Junior children can make a fair rockery with stones as large or even a little larger than their heads. Stones must slope backward to allow the rain to drain back to the plants. Flat stones arranged round a rockery to form Dutch paving, with small plants planted in the spaces, make a good setting. Should no space be available for making a rockery, many rock plants can be grown on a wall near the school. Purple and white Arabis, snow-on-the-mountain, stone-crops, etc., will make a brave show, while requiring little attention.

When a garden has been already planned, and is even worked, by the Seniors, an active part can be taken by the Juniors in tying up plants, tidying up, cutting off dead blossoms to promote further blossoming, and collecting seeds for next year's planting. A happy idea has been started in many rural districts of introducing wild flowers into the hedgerows and waste places.

Foxgloves are perhaps the easiest flowers to treat in this way. The abundance of seeds produced by one plant and their hardy nature make them particularly adapted for hedgerows.

Garden Planning

Simple Plans. E.g. a small flower garden—

(a) Lawn in centre and flower beds round.

(b) Flower bed in the centre and lawn round.

(c) Flower beds round the edge of a lawn, and sundial or rockery in the centre.

(d) Crazy paving path to gate with lawns and beds on either side.

Perennials for Borders These should be arranged according to height and time of flowering. All children will be acquainted with the few or many perennials grown in their cottage gardens, but it is probable that few will know to what an effective use homely flowers can be put in an "all the year round" perennial border.

Two methods of flower marking can be used—

(a) Blocking in various sections of the border with various coloured crayon and having a corresponding colour list

(b) Sketching the coloured flowers roughly.

Annuals. These may be arranged in masses of various colours, or in one or two colours, or in several varieties to form a design. Simplicity of planting should always be adhered to, both in regard to colours and kinds of flowers used.

Rockery Planning. (i) Shapes of rockeries according to position and elevation.

(ii) Plants to be used.

Arches and Pergolas Climbing roses, clematis, jasmine.

Shrubbery Work Well-known flowering shrubs arranged to show continuous blooming.

Rose Beds. Varieties of roses, and borders of suitable edging plants.

Formal Bedding Spring—tulips and forget-me-nots, summer and autumn—gladioli and begonias; these suggest only a few of the many ways of arrangement and treatment

Plans to be Worked Out on Paper

Plan 1 (Fig. 3). *Centre Bed.* Roses (red and yellow) and yellow violas.

Corner Beds. (a) *Spring*. Daffodils and wallflowers, border of arabis, *Summer* · Asters (mixed colours)

(b) *Spring* · Tulips (yellow), forget-me-nots, and border of daisies. *Summer* · Marigolds.

Trees in Plan 1 Laburnum and weeping willow

Plan 2 (Fig 4) Herbaceous border round three sides. Tall plants at back, hollyhocks, delphiniums, lupins, michaelmas daisies, blue thistles, anchusa, lavender, golden rod, red-hot pokers, etc. Plants of medium height should be placed in front of these, e.g geums, oriental poppies, peonies, tulips, daffodils, blanket flowers, nepeta (cat mint), carnation, coreopsis. Low plants should edge the border, e.g. daisies, pinks, violas, pansies, perennial candytuft etc.

Pergola fence—Paul's scarlet climber, yellow and white jasmine, Dorothy Perkins, Hiawatha clematis, etc.

Sundial and bird-bath can be set in the lawn.

Plan 3 (Fig. 5). A circular plan by which all plants can be tended and reached without stepping on the actual bed. A pond is in centre with a surround of rock plants. Encircling this is a crazy paving path. Next a herbaceous border, on the outside of which is a circle of pillars
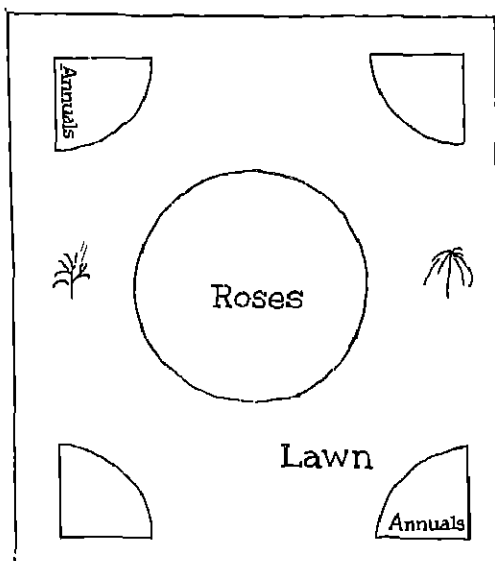
FIG. 3
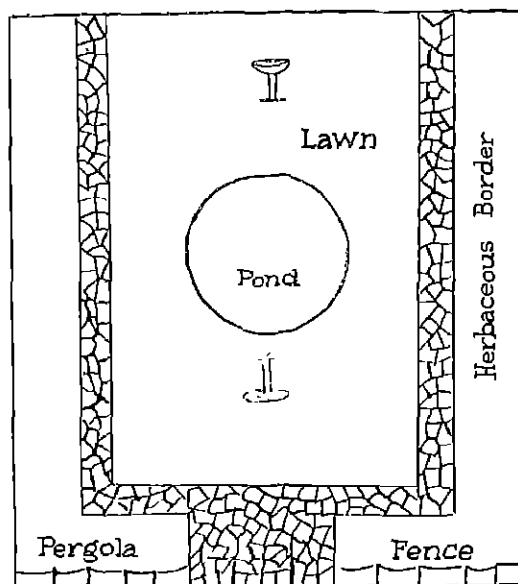
FIG. 4
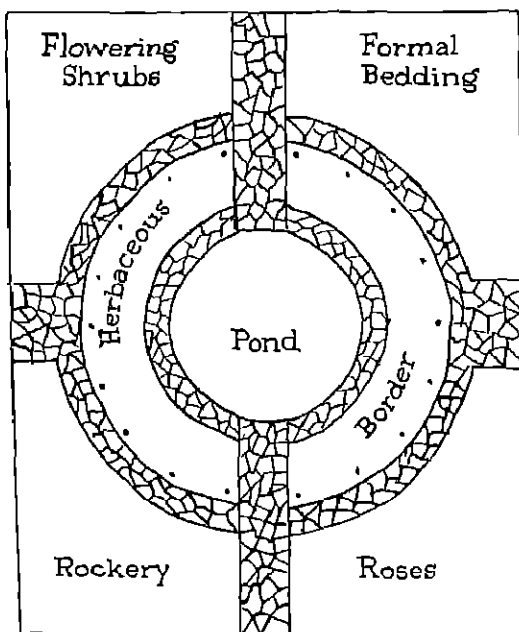
FIG. 5
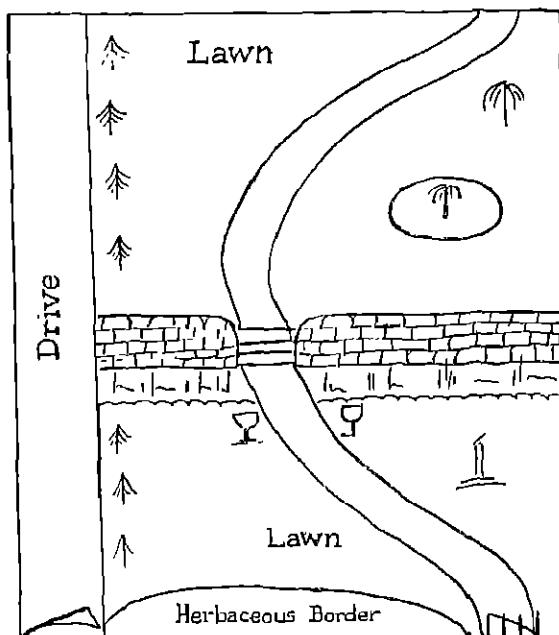
FIG. 6

for roses, etc. Beyond the border is another path of crazy paving. The corner beds might cons.st of roses, flowering shrubs, or formal bedding, while two garden vases on crazy paving complete the sides.

Plan 4 (Fig. 6). This plan is decidedly more difficult than the preceding three, involving two
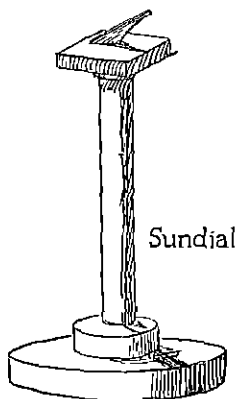
Sundial

FIG. 7
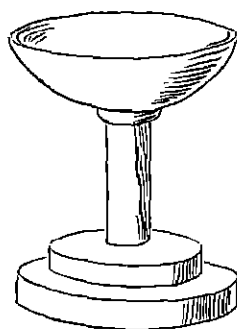
Bird Bath

FIG. 8

levels connected with steps flanked by a fruit wall. A winding path is bordered by a lawn in which are placed a sundial, weeping willow, ornamental fish pond, and tubs of flowering plants or clipped box bushes. Flowering trees make a side screen, while at the road end a herbaceous border leads to the gate.
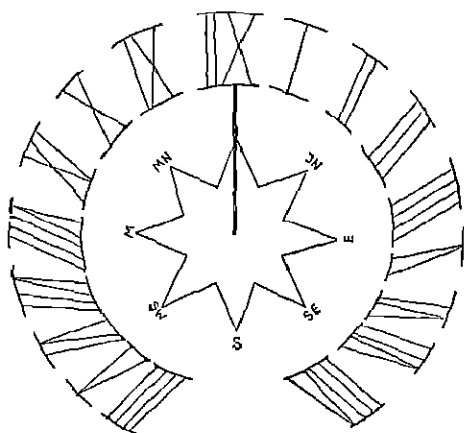
FIG 9

Cardboard Sundial

To be drawn on card 8½ in. square. Acute base
angle of sextant, 54°

Method of Making Plan on Paper.

The plan itself on paper should be drawn in pencil, and either made in "black and white" or painted in water-colours. Pastels, too, can be used with good effect on green tinted paper.

Construction of Models

The models of the gardens, etc., are best prepared on a large sand tray, and may be the work of the entire class, of a group of workers, or of an individual. This depends on the size of the class, the age of the children, and their handwork capabilities. For young children simplicity of working media is essential. Elaboration in any way, either in planning or modelling, tends to confuse the child.

A large sheet of green paper, painted or tinted, makes an admirable background, and can be used for a number of plans. A saving of material will be noted if paths, beds, etc, are superimposed on the green background. These can be moved about on the green card, while the green card allowed to show might represent lawn, orchard, or paddock. If this method is followed, then the models can be varied and progressive with the minimum of material used.

Thin towelling dyed green is also useful for patches of grass.

Crazy Paving. (a) White or cream paper or cardboard with markings for stones.

(b) Irregularly cut pieces of three-ply wood, wood to be cut with a fretsaw.

Bowl

FIG 10

(c) Small pieces of actual flat stone or flat pebbles.

(d) Small pieces of broken flower pots

Gravel Path. Sandpaper cut into required lengths. Coarser paper gives the best effect

Rockery. Small stones or pebbles, and sand

Sundial (Fig 7). This should be made of any good modelling material (such as duroplast or barbola paste) which will readily harden. The base may be round, square, or hexagonal, and

should be exact and trim. A piece of wood inserted inside the upright column of modelling medium gives it strength. A circle or square at the top completes the stand.

The Dial The model of a sundial which would be used in a model garden would be so small that the bare indication only could be made of the dial, and a couple of small pins would serve for a pointer (Should a larger model of a sundial be constructed, however, Fig. 9 shows a dial which could be made of cardboard) The various sections should be secured together by damping the surfaces to be stuck. The whole

FIG. 11
*Sunflower and
Delphinium*

FIG. 12
*Foxgloves and
Oriental Poppies*

model should then be brushed over with a little of the paste softened to a consistency of thick cream. Care must be taken that the model is quite perpendicular, and is put in a safe place to harden.

Bird Bath (Fig. 8). This model might be made of the same material as the sundial. This represents concrete or stone in a real garden. For the base and short standard the same method is observed, but a shallow bowl is made for the bath. It is well to explain why the bath must be shallow for the birds. Explanation of reasons and use previous to working lessens chances of misunderstanding and mistakes by the scholars. The sections are united as in the sundial.

Garden Vase (Fig. 10). Here, again, the base and standard are similar to those of the sundial, but variations can be made by having the bases of different shapes.

Pillars for Gateways. Stone pillars for gateways are similarly made with modelling material

as are columns for verandas, pergolas, and "rick-stoops," which are so popular just now for rural gardens.

Ponds. A homely "patti pan," or small lid of a tin, will serve to hold water for the miniature pond. Glass might be used, but it is not to be recommended unless the edges are bound with tape or *passe-partout* to protect the fingers. If the inside of the lid or tin is painted a greenish blue an effect of depth is obtained. Small pebbles, such as are used on the roads in frosty weather, serve to surround the pond

Flower beds of various sizes and shapes can be simply made with lids of tins filled with soil, sand, or peat dust. The shining edge of the tin should be covered with brown paint or dark binding. If the soil of the beds is definitely in a container a tidier and cleaner model is maintained than if the soil is heaped loosely on the background.

Flowers. To attempt to make individual flowers to form a border or bed of a small model would be absurd, but colour blending and grouping and suitable arrangement may be done with *Coloured Raffia.* A few instances only will be given

Sunflowers (Fig. 11). Loops of orange and yellow raffia arranged and wired round a brown boot button, and the whole wired with fine wire to a small stick covered with green crêpe paper, or dipped in green paint or dye.

Delphiniums (Fig. 11) Loops of blue wools of various shades wired to a fine stick form the flowers, and green raffia cut in short lengths and wired lower down the twig will form the leaves. These, like the sunflowers, are more effective if used in groups

Foxgloves (Fig. 12) Small pieces of green macramé twine dipped in sealing wax and wired so that the sealing wax heads hang downward.

Oriental Poppies (Fig. 12) Shells of beech nuts painted or dyed and wired to stems.

Edging or masses of multi-coloured flowers may be represented by raffia looped through canvas, as in the making of wool rugs The canvas background can be stuck to thin cardboard

Lumps of disused plasticine serve to hold the stems of the flowers upright These should be covered with the sand or soil of the bed.

Hedges and Bushes can well be made with—

(*a*) White feathers from the fowl house dyed green and tied into bunches.

(*b*) Green raffia tied or wired to twigs

(*c*) Sprigs of thyme. This latter plant lasts some time when gathered, and forms an effective bush for a model, as the leaves are so small.

Trees. These are effective when made with twigs of a suitable plant or tree, as they can be
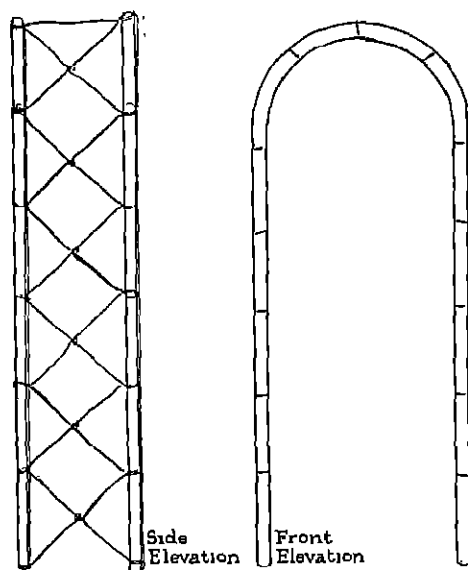
FIG. 13

Garden Arches. Cane and Wire

constructed of raffia wired to a foundation for the trunk. Dyed feathers cut to form tree shapes are another suggestion, while there is always the crêpe paper idea. For small trees a stout pin should be wired into the trunk, so that it can be stuck down into the foundation.

Gate. Strip wood secured with glue or gum, or strips of stout cardboard, may be used.

Fence. A formal fence is easily constructed with brown cardboard, either cut out in strips or fastened together.

Walls. Here cardboard with markings for stones is the simplest method.

House. This should be made of cardboard (see diagram of cottage). The whole can be coloured. Windows could be made of mica or celluloid stuck inside the window opening.

A thatched roof is made by covering the whole of the roof with some adhesive, and laying on raffia in strands, allowing a little to overlap the edge of the roof Further layers of raffia are added, these being sewn down with long stitches of raffia running across the roof.

Garden Seat and Table A quaint set of garden furniture could be made with coloured headed pins, embroidery silk, and small pieces of cork or chestnuts. After cutting the corks to a suitable size and shape for table and chairs, the pins are inserted to form either legs or back, while the silk or wool is wound round and between the pins.

Arches (*Fig. 16*). This arch can be made of cardboard painted brown to resemble wood. The strips are ¼ in. wide, mounted on a cardboard base An extension of this makes a good pergola, and is an easy model for Juniors, as the top is at right angles to the uprights. The sections are secured with gum or paste.

If strip wood is used, fasten with small panel pins.

Fig. 13 shows arch of cane and wire. Two equal lengths of No. 12 or No 10 size cane should be damped, bent, and fixed into a base of three-ply wood, cardboard, or lump of clay The ends of the cane should be firmly fixed before any interlacing is begun. Medium-sized wire bought on reels or in rolls is then woven from one cane to the other (Fig. 13) Care must be taken not to either pull the cane out of the vertical position or have the wire slack. When the weaving has been completed one way, the returning strand of wire should be twisted round the first wire midway between the two canes.

Well (*Fig. 17*). A circle of cardboard roll is required for the well top and upright, cardboard posts should be secured to the sides Stiff wire forms the handle and windlass A strip of cardboard or piece of paper (corrugated or plain), creased to form the apex

Dovecot
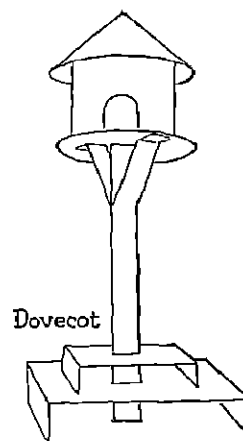
FIG. 14
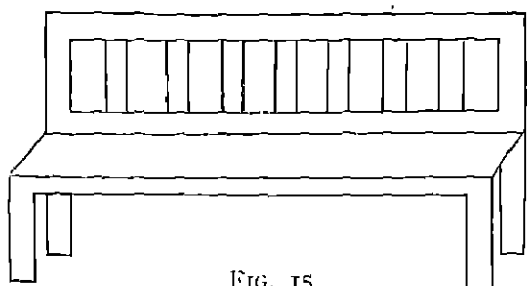
FIG. 15
Model of Garden Seat
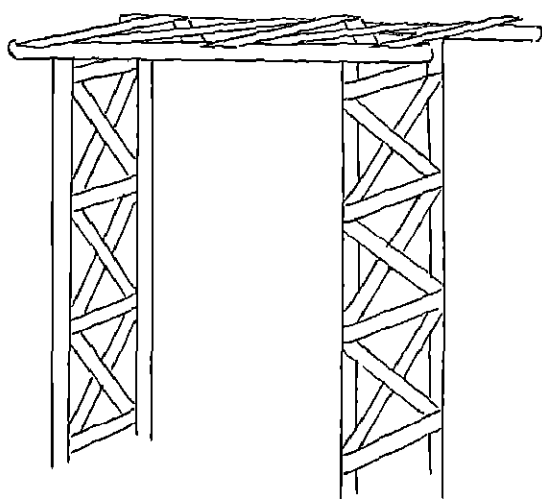
FIG. 16
Cardboard Arch
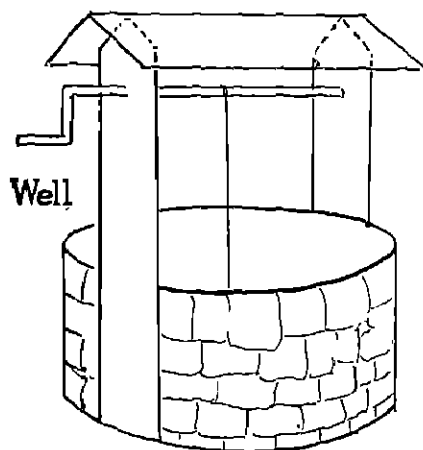
Well

FIG. 17
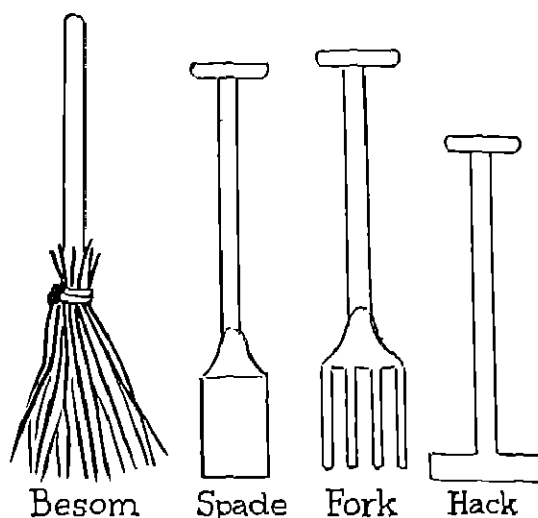
Besom   Spade   Fork   Hack
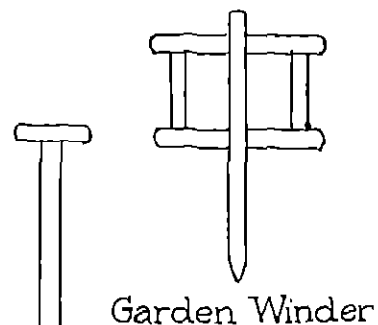
Garden Winder
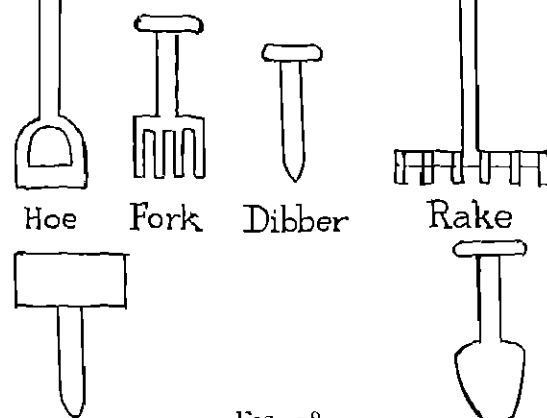
Hoe   Fork   Dibber   Rake

Label

FIG 18
Garden Tools

Trowel

*Round wood, or cane, and twigs for besom   Tin
or cardboard for other tools.*

of the roof, completes the well. Bucket could be made of barbola paste.

Dovecot (Fig. 14). An effective pigeon or dovecot can be made with a section of cardboard roller about 2 in. deep surmounted with a cone of paper for the roof. Thatching can be illustrated by arranging strands of raffia down the roof, and sewing the strands down to the cardboard roof with a length of raffia. Stiff paper

front and seat in one piece, the back in another, and gum the two sections.

The fences to surround the garden might be—

Chequer-board Fence (Fig. 19), which is simple weaving of strips, with uprights attached after the weaving is finished to give strength. The top portion is slightly different from the weaving and should be attached last of all.

Garden Objects

Chequer board fence

Frame

Wheelbarrow

Weed box

Fig. 19
Fences

Fig. 20

or thin card forms the floor of the house, ¼ in. being allowed for overlapping. The house can be supported in two ways—

(*a*) On a cardboard stand with two side struts; (*b*) fixed to a forked twig, either resting between the branches or with these inserted into the house through the floor.

The birds themselves can be modelled from barbola paste or duroplast, and painted when dry and hard. A bird table with birds is simply made with cardboard and twigs.

Garden Seat (Fig. 15) It is advisable to make
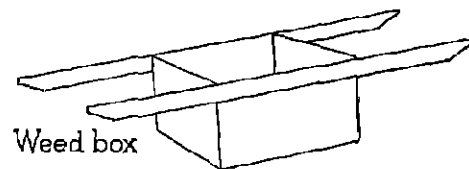
Ornamental Fencing (Fig. 19). This is another idea for strip work, and the drawing explains both layout and method. The uprights must be wider than the trellis work to give support

Other models for the garden project might include: See-saw (section of cardboard roll and strip of wood or cardboard), Roller (cardboard roll, gas-mantle box, or small spice tin for roller, with shaft and spindle of wire, and No. 12 cane for handle), Summer-house (roll with cone for roof, covered with raffia for thatching), Watering-can, and Garden basket (cardboard with No. 10 or No. 12 cane for handle).

HANDWORK IN RELATION TO POULTRY KEEPING

Poultry-keeping is one of our most recent school subjects, and doubtless in our new Senior Rural Schools poultry-keeping, allied with book-keeping, will become more general than it is at present In any case rural districts must, of necessity, be the home of the poultry-keeper, whether his business be of a commercial nature, educational, or only a hobby. A lively interest in, and knowledge of the elementary fundamentals of, the care of livestock can well be cultivated in the Junior departments.

Where poultry is attached to the Senior School to which the Juniors would normally proceed, a model of the existing plant might well be made Should none exist, then a model poultry farm could be constructed. In any case, a few rules on the layout and general construction of any type of poultry house should be explained to the class before any plans are prepared.

Rules the Class Should Know

1. Houses should face the south.
2. Houses should be placed on the north side of the run.
3. Wire surrounding the run should be 6 ft. high, made up of two 3 ft. widths, the lower being 2 in. mesh and the upper 3 in.

4. Runs should be as square as possible.
5 A dust bath must be provided in the middle of each run
6. Houses should contain as much window space as possible in the front, and floor lights at the back.

Plan of Poultry Run and House

This is drawn to the scale of $\frac{1}{2}$ in. to 1 yd. The run is 9 yd. square, with a dust bath in the middle 1 yd. square. The house is 3 yd. long by 2 yd. wide (see Fig. 22).

The posts for the wire are 3 yd. apart, and the gate 1 yd wide.

Construction of Models

If a poultry group is to be assembled, it would be advisable to make all models to the

Fowl House

Roof

9 ft x 7 ft

Hood
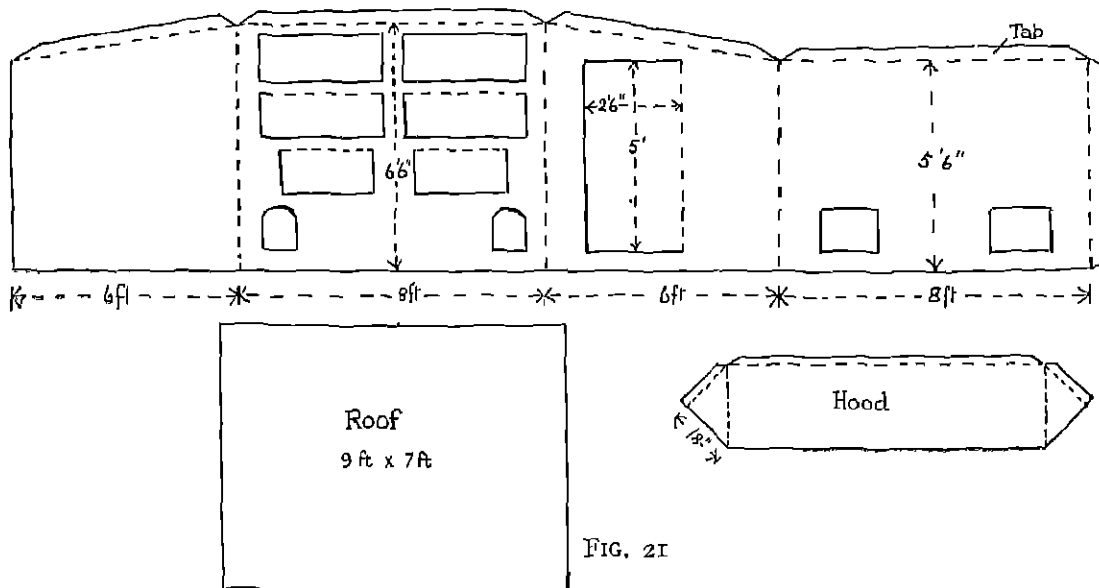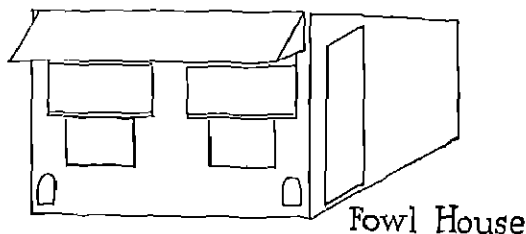
Fig. 21

same scale. The measurements given on the diagrams are those of full-sized poultry equipment. A suggested scale is 1 in. to 1 ft.

Fowl House (Fig. 21). It is advisable to make the four sides from one piece of cardboard, afterwards adding roof and hood. The front windows could be painted or cut, whichever is desired. Three sides only should be cut, so that they can be lifted up to open. The two top spaces, however, should be cut out, as in the actual house; these spaces are covered with wire netting.

The floor lights at the back of the house are for lighting only, and do not open. These could

Plan of Poultry-run

FIG. 22

Top

FIG. 23

Grit hopper

FIG. 24
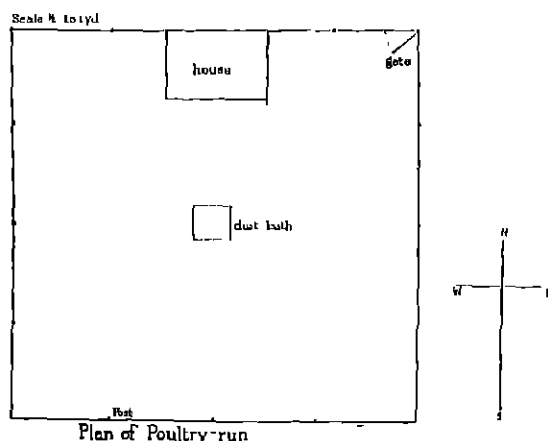
be marked as windows, or cut out with some transparent material, such as mica pasted on to represent glass. The cardboard should be *scored only* where marked with a dotted line.

It will be noticed that the roof overlaps all round. The hood should be affixed close under the front overlap of the roof. The tabs are to be used for sticking the model together.

Dry Mash Hopper (Fig. 23). For this model only two pieces of cardboard are required.

After the model has been cut out, folded, and stuck, the sloping front can be affixed. The folding top may be made slightly larger to allow for an overlap at the front.

This hopper is kept inside the house, hanging near the floor.

Grit Hopper (Fig. 24). This hopper also hangs inside the house near the floor.

Food Hopper (Fig. 25). In this model it would
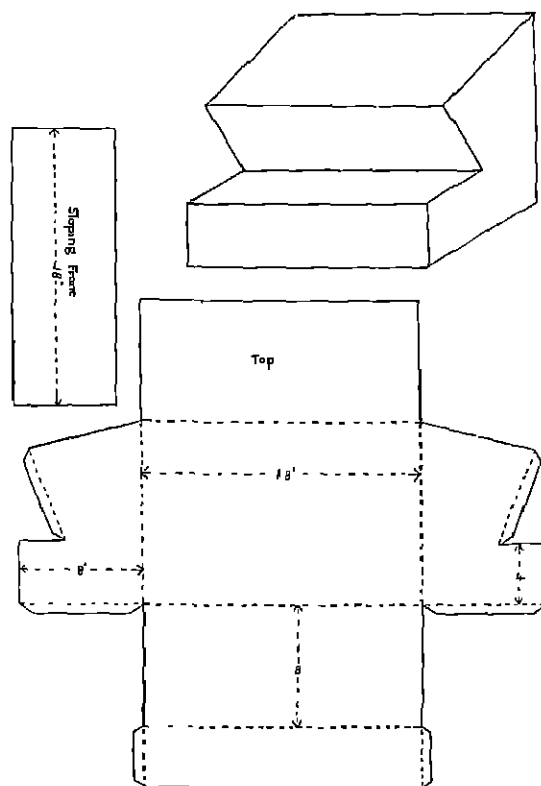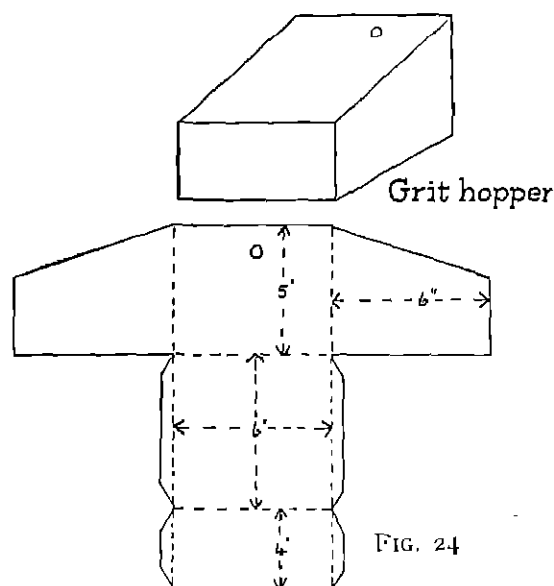
be advisable to make the top rail and the two ends of thicker cardboard.

Broody Coop (Figs. 26 and 27) The back and two sides are formed from one piece of cardboard. The top has an overlap of 3 in. on all

Food hopper
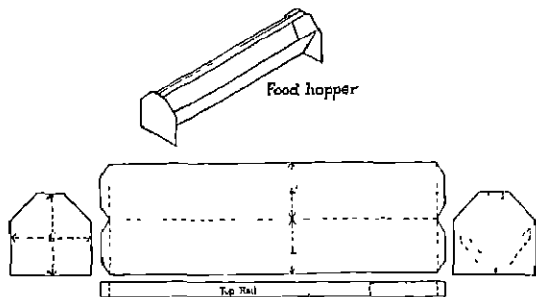
FIG 25

sides. The hole is necessary to allow one slat to be moved in and out. The remaining front slats are stuck to two strips of cardboard running the length of the coop These two strips also help to hold the sides in place. The floor also consists of slats. As the coop stands clear of the ground

Poultry
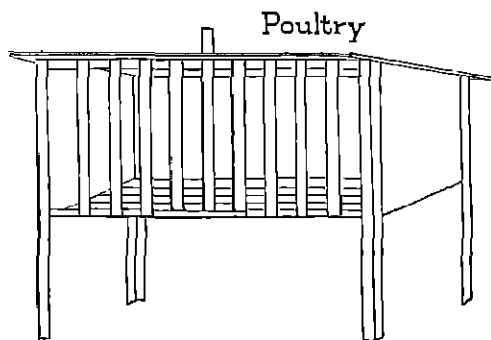
Broody Coop

FIG. 26

four legs are affixed, one at each corner. The measurements and details are given in Fig. 27.

Chicken Run and Coop (Fig. 27). The coop for the chicken run is made in a similar manner to the broody coop (Fig. 26), but has no floor.

The run is made separately from one piece of cardboard, and should just fit the coop. The ends of the run will be held in position by means of two strips, one placed across the top, and the other across the bottom.

Papier Mâché Bowls

These bowls can either be used for corn for the poultry at school or at home, or they might be used in the classroom for bulbs or plants.

The outside (or inside) of a mould (china, enamel, or tin) should first be smeared with grease A quantity of plain flour should be mixed with boiling water and a little size, to the consistency of thin paste. The paste must be well stirred before use. Have handy a number of old newspapers which have been cut into strips ¾ in. wide. Place a number of strips over the bowl

Chicken run
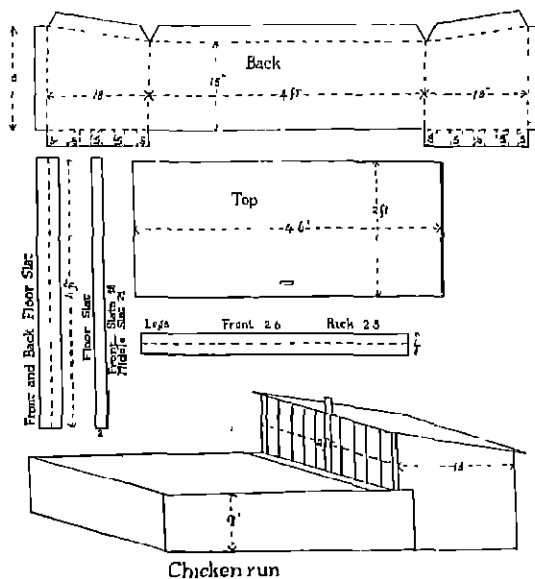
FIG 27

on the greased surface, arranging that the print is all the same way. Paste a thin layer of paste over these strips, and stick another layer of paper arranging the print the opposite way to the first layer. In this way the child can tell at a glance if the layer has been completed round the whole of the bowl Each layer of paper should be well pressed down with the fingers, and all superfluous paste pressed out More paste and further layers of paper are added until the thickness of the pulp is about $\frac{3}{16}$ in. If the outside of the mould is used, it should be turned upside down before sticking is begun. Bowl should be left several days to harden and set. Then the *mould should leave the pulp.*

HANDWORK IN RELATION TO FARMING

In making a model farm and its surroundings, a large tray or box lid is necessary, as a foundation and as a background for the various houses and out-buildings.

Models

Farmhouse A farmhouse might be made from the model of the cottage (Fig. 28). Many farmhouses have been added to at various times.
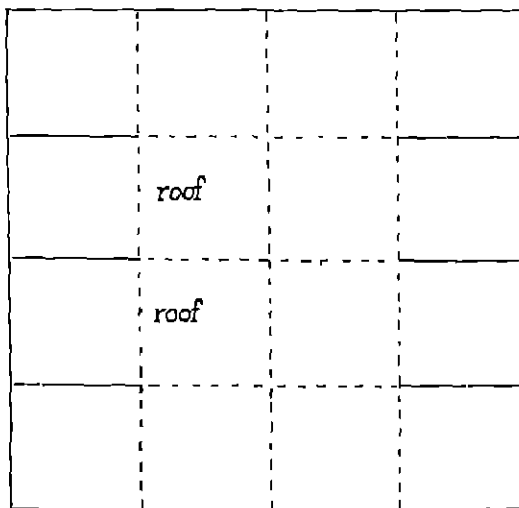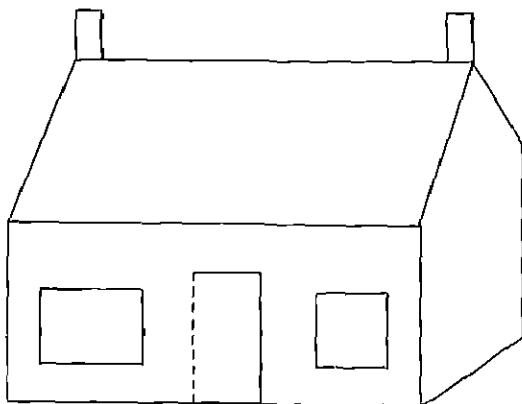
Cottage   FIG. 28

Dotted lines denote folds, thick lines cuts. Suggested size of squares · 1 in side Model may be enlarged by increasing size of each square or number of squares This method of construction may be used for shops, inns, etc , relative size and finish being varied accordingly

Two "cottages," one at right angles to the other, may be used. Larger squares or more squares added will enlarge the "cottage" model. A porch or a lean-to shed is easily added. Barns, cowsheds, pig-sty, stable, garage, and cart house are all based on the same "cottage" model. All the buildings can be painted with water-colours.

For Juniors, the models should be as simple as possible. Complicated details and much ornament tend to increase difficulties, and this often lowers the standard of work A simple cottage
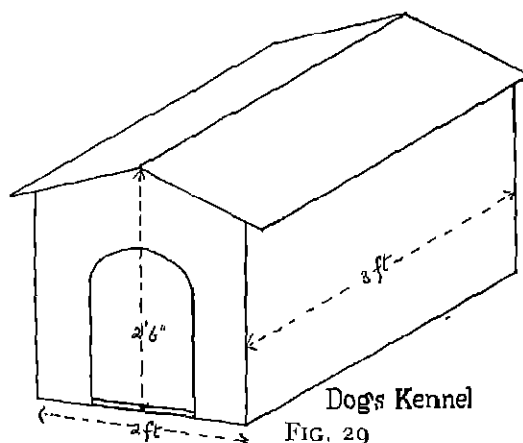
Dog's Kennel
FIG. 29

Four sides and bottom are marked out on flat sheet. Actual measurements are given on diagram ; suggested scale 1 ft to 1 in Entrance should be cut before folding, roof is in one piece and overlaps sides

Field poultry house (Fig 31) is development of this, much larger, with windows marked and space for wire netting marked or cut out Entrance door one end and hole for fowls the other. Wheels of solid cardboard, with spokes and rims painted A ladder run for the fowls is made with strips as farm ladder, but with cross-strips somewhat wider

well made, and its principles understood, so that it can be adapted to further models, is a more useful piece of work than a more ornamental house, probably with an inferior finish.

Cottage (Fig. 28). A few cottages for farm workers are often attached to a farm. The model is made on the "square" system. The dotted lines show where the cardboard is scored only The heavily marked lines are cut. The end squares fold over neatly at the ends; doorways and windows can be either painted on or cut out. Chimneys are attached.

Other models for the farm might include: Stable, Garage, Barn, Cart House, Cow Pens, Ladder, Hand Truck, Goose House, Pig Trough, Pig-sty, Field Roller, Hay Rake and Fork, Hayrick, Cart, Dog's Kennel (see Fig. 29), Manger (see Fig. 30), and Field Poultry House (see Fig 31)

The Dairy

A model dairy might be laid out either on the lid of a box or in the box, the white sides of the box making the walls. A wide doorway is necessary for the trundling in of the milk churns

Milking Stools (Fig. 32). These might be made of cardboard or strip wood. Those used in most English pastures are most crude, being two pieces of wood nailed together. Those used in Jersey and Guernsey, however, are of the three-legged variety, and are beautifully made and kept scrubbed scrupulously clean.

Milk Pail (Fig. 32) This model might be made of any modelling medium such as duroplast or barbola, or it might be made of a section of cardboard tubing painted. The handle should be stuck on if made with cardboard.

Milk Strainer (Fig. 32) A square of butter muslin tied to two round pieces of wood or cane

Milk Churn (Fig. 32). This model is a development of the cone A small circle of thin cardboard should be fixed to the top of the churn to support the cover.

Butter Churn (Fig. 32) A large cotton or thread reel wound round with twine or raffia and covered with duroplast and painted makes the barrel Another way is to stick paper mash on to a reel and, when it is dry and firm, paint it to represent a churn.

Cane is bent to form the handle and passed through the reel, while the whole rests on a stand made of strip wood or cardboard

Care must be taken in forming the barrel that it will be even and revolve smoothly.

Butter Hands (Fig 32). Made of cardboard.

Cheeses. Made of barbola or similar paste.

Cheese Tub. Small cardboard box with cane bent to form steam pipes, which pass through the wall of the dairy

Bowl for Dipping Milk. This, again, is made

from modelling paste, so also might be *cream pans* and *whey buckets*.

Countryside Models

Many interesting and instructive models might be based on the British countryside. A few examples are given in Fig 33, but the teacher will naturally see that in particular districts various methods of fencing, gates, stiles, and walls predominate. In some counties stone stiles are very common, in others they are unknown. Boundaries of fields can be as diverse as hedges, fences (wire, iron, and wooden), walls (dry and stoned), banks, and deep treacherous rhines, an interesting study in themselves A commencement would be made with those field objects seen at hand, and most of these models must of necessity be made of cardboard or wood

A Signpost. A simple strip-work model.

Unless the sign is fixed to a wall or post a base will be needed similar to that of the dovecot (Fig 14), this, of course, is most necessary for a cross-road sign

Field Gate (Fig. 33). Simple strip work. The gate might form part of a fence

Stile (Fig 33). This, too, might be fixed into the fence For the step, two upright pieces of cardboard must be fixed to the "step" piece, one on each side of the stile.

Wall (Fig. 33). Walls must be made of cardboard, the stones being represented by lines and by water-colours In some counties where walls are a common boundary, two forms of stiles are used—

Steps (Fig. 33) These are made by inserting strips of cardboard through slits cut in the wall. The cardboard steps must fit the slots exactly

Stile (Fig. 33). These stiles are made of solid slabs of stone or slate, cut into a V-shape, and can be modelled in cardboard.

Blacksmith's Shop. The smithy is an adaptation of "cottage" model, but door must be cut large enough to admit a model horse. One chimney is necessary, also a window, which is usually found opposite the doorway

Anvil (Fig 34). Made of "permanent clay."

Leather Apron. Scraps of leather are best for this model. (Note slit in apron to allow horse's hoof to come between the smith's knees)

End View

Manger

FIG. 30

Wire Netting   Wire Netting

Field Poultry House
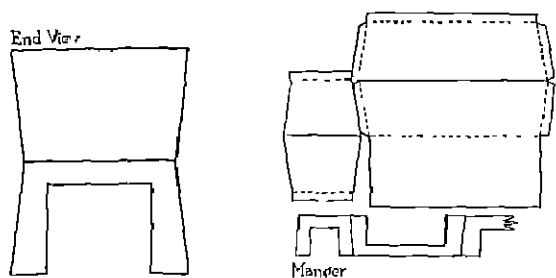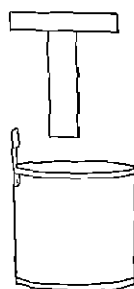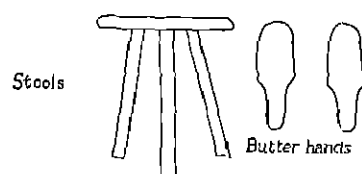
FIG. 31

Stools

Butter hands
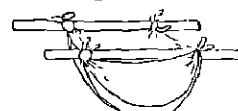
Milk pail   Milk strainer
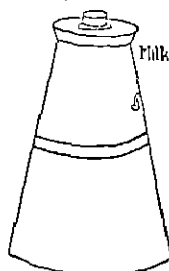
Milk churn
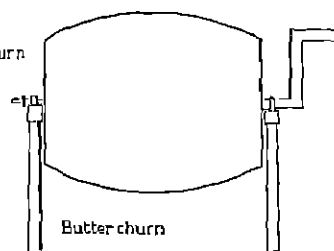
Butter churn
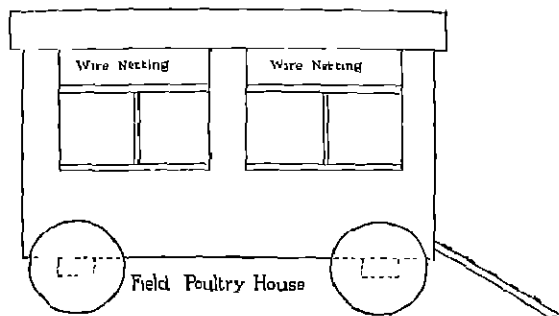
FIG. 32

The Dairy
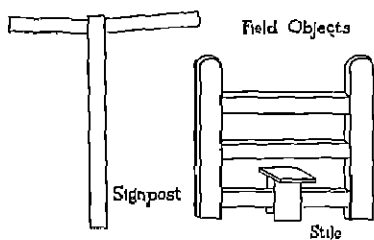
Field Objects

Signpost   Stile
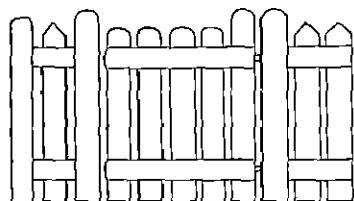
Gate
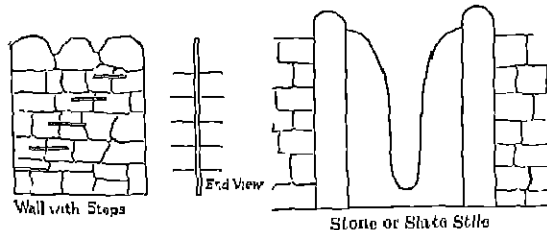
Wall with Steps   End View   Stone or Slate Stile

FIG. 33

Smithy

Anvil   Apron
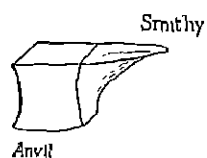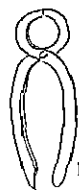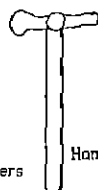
Pincers   Hammer   Horseshoe   Tub

FIG. 34

The Smithy
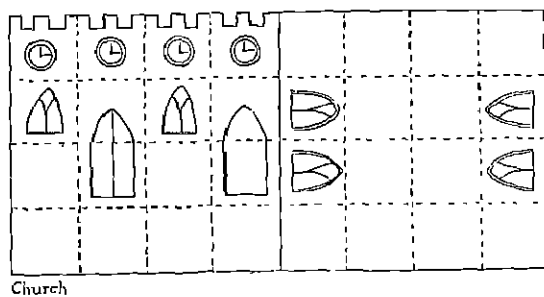
Church

FIG. 35

The Church

Pincers (Fig. 34). Made of permanent clay

Hammer. The head is made of clay, while the handle is a small piece of cane or wood.

Horseshoe Made of tin, pewter, or clay

Tub. Made of permanent clay and coloured.

Church (Fig. 35). This model is a further extension of the cottage. Windows should be cut while the model is flat, and are most effective when coloured mica (from Christmas crackers) is used to represent glass.

A Country Fair model is always popular. Two suggestions are given here.

Roundabouts. A cone of card will be necessary for the top, which must be gaily painted or covered with bright paper, which might hang over the edge of the cone. This top must be of strong card to hold the wires supporting the animals. At equal distances round the cone an end of wire is passed through the card. The ends are twisted together and fixed through a cardboard animal. Care must be taken to see that the animals will balance well. If the model is a large one, two wires to each animal will be necessary. A strong cardboard or wooden centre is necessary with a pivot at the top, a round piece of cane or a nail will serve for this pivot. It is necessary that this model should revolve, so care must be taken that the animals or birds are of the same size, if not the same shape, and that they are evenly spaced round the cone.

Coco-nut Shy. Use acorns for coco-nuts, and their cases, supported on long large pins, for the holders. Acorns are easily obtained in most districts, but another method of making the coco-nuts is to use modelling paste (barbola or durloplast) and allow it to set. The cups to hold the nuts can be made of twisted wire, to form both the ring at the top and the pin. The background could be cardboard.

RURAL INDUSTRIES

While it is sometimes difficult to interest young children in any industry which must needs be carried on in a town, they readily understand and become interested in an industry of their own neighbourhood, or one which demands the same sort of treatment. Interesting maps and diagrams might be prepared by the older classes to indicate where rural industries are carried on: (*a*) in their own county, (*b*) in England or the British Isles.

Lessons on these industries and, where applicable, models or made illustrations could all combine to show how the rest of the rural community earn their livings.

Charcoal Burning

This is one of the most ancient of our surviving industries. The charcoal burner is the original collier, just as charcoal is the original coal. The production of charcoal, however, has been dwindling for centuries, and has now reached a condition when its total disappearance would affect only a small number of workers. It may be, however, that when forestry is again regarded seriously in this country the charcoal burner may be seen more frequently than he is to-day. A great blow to the industry must have been struck by recent changes in the methods of producing steel, and much charcoal is produced to-day in ovens and retorts

Although the industry is old and primitive, and perhaps the methods used in the woods to-day differ in no essential details from those used eight hundred years ago, when the body of Rufus was conveyed to Winchester on the charcoal burner's cart, it must not be imagined that charcoal is produced by an unskilled labourer. His knowledge and skill make up for the poorness of his tools. He must be able to make as well as use those tools which he needs He must be content with a lonely life.

The hearth is prepared by levelling off a selected portion of ground near where the trees have been felled by the timberman, and the large trunks and branches carted away for the builder's use. On the level circular hearth three short billets are laid against a stake in the centre of the hearth, to form a triangle. More sticks are piled on these in threes until the pile reaches the height of five or six feet Then much longer billets, or sticks, are stacked on end round these, until the whole heap reaches out to the circumference of the circle

The whole heap is then covered with a " crust " of rushes, ferns, moss, and moist earth. Holes are made through this covering near the ground to let in air for the fire. A screen of twigs and branches is set up to keep off the prevailing wind from the heap.

The fire is started by a shovelful of live coal put into the shaft. At no time is the "fire" allowed to break into flame. Combustion is slow and, by judicious opening and closing of vent holes, the temperature is kept even for about three days. The temperature is varied according to the purpose for which the charcoal is required It can be made at a temperature of 250° C., but the lowest temperature at which satisfactory coal can be made is 300° C., and that which is produced at this low temperature is light and inflammable, such as is used in the manufacture of gunpowder.

Two days after the fire is put out, the pile is broken open and the charcoal scattered. The pieces are then sorted according to size and packed for distribution The percentage of charcoal from a given quantity of wood is from 30 per cent to 40 per cent of the volume, and from 18 per cent to 25 per cent of the weight.

Turf Cutting

This occupation can be carried out only in the summer months. Then, whole families are engaged—fathers and elder sons in cutting, mothers and children in stacking. In early spring, autumn, and winter, the turf fields are too wet and sodden to allow any cutting to be done Turfing is a trade which is carried on by father and son, and although coal has to a large extent superseded turf or peat in England as a fuel, all that is procured finds a ready market and demands a fair price. The herbage on turf is coarse and rank, so that the price to cut turf is not too exorbitant. After the green vegetation has been removed from the field, the brown turf is exposed and is cut down to a depth of 1 ft. with a sharp spade-like knife. In shape this implement is like a long narrow garden spade, but has a sharpened edge The turves are cut 2 in. by 9 in. by 4 in. in most districts, but they vary slightly in thickness The Irish turf is more brick-like, and in colour much

darker than the English variety. The men and boys cut down the turf 3 ft. or 4 ft., while women and children stack the turves into conical towers with spaces between to admit air for drying. These towers are often made on the spot where the peat is dug, but are sometimes erected in a special yard. When dry the turves are ready for sale. The broken bits or dust is used for bedding for horses and potting mixtures for horticulture, a modern use has been found for this dust in packing the spaces between floors to render them soundproof

Spar and Hurdle Making

Hurdles are used for fencing, particularly for enclosing sheep, and in grazing districts the making of hurdles employs a fair number of workers Split willow is used, the ends of the rails passing through holes in the upright stakes, which are pointed at the bottom so as to be easily driven into the ground. Diagonal pieces are nailed on to the rails to give them stability, as in the case of the five-barred gate To form an enclosure these hurdles, placed end to end, are tied with a green withy stick or rope.

Spars to hold thatch on the ricks are also made by splitting willow. Each spar, about 4 ft long, is twisted in the middle, and bent over hairpin shape, the points being sharpened These spars are used to hold down the binding rope made of twisted straw which keeps down the thatch, the spars being pushed into the rick to their full extent. Many farm labourers spend their autumn and winter evenings preparing spars for the coming thatching season. When made they are tied up in bundles, each containing 120 spars ("a long hundred").

Cider Making

In Gloucester, Somerset, Devon, and parts of Dorset, cider-making is a regular autumn business When the crop of apples is a good one, the making of cider may last several weeks. The apples are shaken from the trees and collected in heaps on the ground in the orchard. They are then shovelled up into carts and wagons and taken to the farm The mill then receives the apples.

THE SOCIAL SIDE
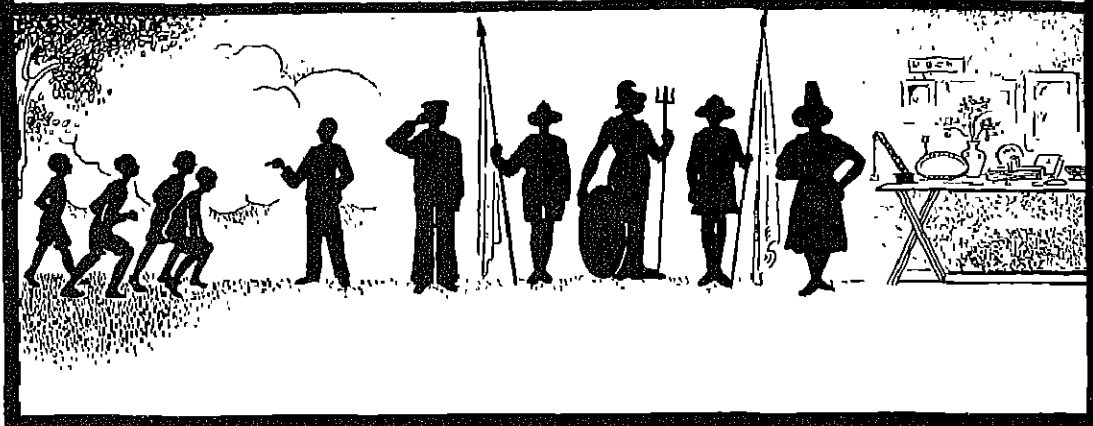
SCHOOL ACTIVITIES

SPORTS DAY

A POINT frequently urged against reorganization, particularly in Boys' Schools, is the loss of the opportunity to participate in sports activities in the Junior School. This sudden cessation of a tradition, with its live influence in a school, is a serious matter,
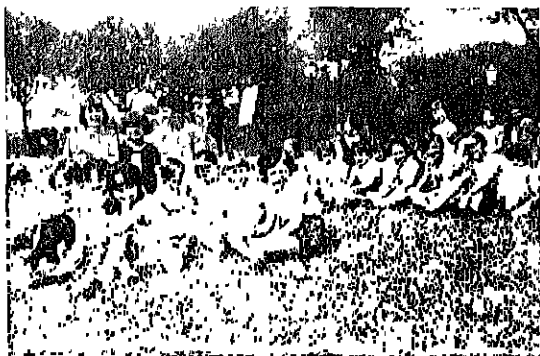
FIG. 1

Waiting for the Whip

and one not to be too lightly dismissed. In spite of the restricted opportunities for competitive sports in the Junior Departments, the Primary School may still have its Sports Day.

This red letter day is eagerly awaited by all those who wish to strive for the honour of their "house."

Before the Day

Much preliminary preparation is needed if the Sports Day is to be successfully carried through Here is a chance for the member of the Staff who possesses organizing ability. He should be elected to act as General Secretary at a staff meeting convened to discuss the preliminary arrangements A management committee should also be appointed and the duties of each member should be clearly defined. It is the business of this committee to draw up a programme, to supervise the entries, and to appoint Starters, Judges, Whips, and Stewards. If there are separate departments for boys and girls in the school a combined Sports Day may be held and events in which boys and girls may compete together should be incorporated in the programme.

With the object of providing physical, mental, and moral training for the greatest number, the events should be such that all except the invalids may participate. The object of a Junior School athletic meeting is not to

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find future champions but to inculcate the team spirit and develop the spirit of sportsmanship.

The Programme

Nothing beyond the sprint need be attempted by the Junior children. Distance races are too strenuous and exhausting for young pupils, and obstacle races should not be attempted unless the obstacles are very simple and easy to

FIG. 2

Charley's Aunt Race

An anxious moment

negotiate. Relay races for boys and girls should be included. These events cause great excitement and an inter-departmental team race, in which a team of boys competes with the girls' team, often proves the best race of the day. In this event the boys' team usually concedes a start.

In addition to the usual Sack, Three-legged, and Egg and Spoon Races other *novelty races* should be included in the programme in order to stimulate the interest of those children who may be aware of their lack of speed.

A *Charley's Aunt Race* always provides much amusement for competitors and spectators.

For this race bundles of clothing consisting of skirt, jacket, and hat are placed 100 yards from the starting post. The boys race 70 yards and touch their girl partners, who race the next 30 yards, catch up a bundle and run back to their partners. The boys then dress in the costumes provided—the quainter the better—and race back to the finishing post.

The *Jack and Jill Race* is another combined race which is very popular with boys and girls. In this event the boys race a short distance and touch their girl partners. The girls then run to

FIG. 3

Team Race Practice

a row of pails each of which is partly filled with water. Having procured a pail they race back to the boys and each pair double back to the finishing post carrying their pail between them.

In the *Bus Horse Race* competitors race in pairs with arms crossed and hands clasped behind them.

Boys and girls are again paired as partners in the *Horse and Driver Race* the boy is the horse and the girl drives her steed by means of ribbon reins.

In pairing boys and girls in the combined races, a good plan is to parade boys and girls so that they face each other. When the signal is given the girls choose their boy partners or the boys choose their girl partners. This pairing is best done before the day

The following list of events has been found suitable for a Junior Sports Festival.

LIST OF EVENTS

Sect I

Boys

No		
No 1.	60 yd. Level (7–8 yr.)
„ 2.	60 yd. Level (8–8½ yr.)
„ 3.	60 yd. Level (8½–9 yr.)
„ 4	80 yd. Level (9–9½ yr.)
„ 5	80 yd Level (9½–10 yr)
„ 6	100 yd Level (10–10½ yr.)
„ 7	100 yd Level (10½–11 yr.)

Girls

No 19	60 yd Level (7–8 yr)
„ 20	60 yd Level (8–8½ yr)
„ 21	60 yd Level (8½–9 yr)
„ 22	80 yd Level (9–9½ yr.)
„ 23.	80 yd Level (9½–10 yr)
„ 24	100 yd Level (10–10½ yd)
„ 25	100 yd Level (10½–11 yr.)

Sect II

„ 8	220 yd Level (10–11 yr.)
„ 9	100 yd Handicap (under 9 yr.)
„ 10	100 yd Handicap (9–11 yr.)

„ 26.	220 yd Level (10–11 yr.)
„ 27	100 yd Handicap (under 9 yr.)
„ 28	100 yd. Handicap (9–11 yr.)

Sect. III

„ 11.	Sack Race (under 9 yr)
„ 12	Sack Race (9–11 yr.)
„ 13	Bus Horse Race (under 9 yr)
„ 14	Three Legged Race (9–11 yr)
„ 15.	Horse and Driver Race (under 9 yr)
„ 16	Charley's Aunt Race (9–11 yr)
„ 17	Jack and Jill Race—any age
„ 18.	Egg and Spoon Race—any age

„ 29	Bus Horse Race (under 9 yr)
„ 30	Horse and Driver Race (under 9 yr)
„ 31	Charley's Aunt Race (9–11 yr)
„ 32	Jack and Jill Race—any age
„ 33.	Egg and Spoon Race—any age
„ 34	Skipping Race (under 9 yr.)
„ 35	Skipping Race (9–11 yr)

School Events

36 Colour Team Relay Races Boys and Girls
37 Inter-departmental Team Race, Boys v. Girls.
38 Tug of War Boys' Colour Team Competition

NOTE. In Events 15, 16, and 17 (Boys) and 30, 31, and 32 (Girls), boys and girls will be paired as partners Events Nos 18 and 33 will be run together.
A Competitor may enter only ONE race in each of Sections I and II, and Two races in Section III

REGULATIONS

1. All ages are calculated at 31st March.
2. The event number, as shown in the Programme, corresponds with the List of Events, and must be worn by every competitor in the event.
3. Competitors must report to the Whips IMMEDIATELY the number of the Event in which they are competing is placed upon the Blackboard.
4. Competitors will be arranged in Heats by the Whips
5. All Heat and Final Winners will receive a ticket from the Judges This ticket must be taken IMMEDIATELY to the Record Table.

Officials

The Starters, Judges, Whips, Marksmen, and Stewards should be aware of their respective duties and should confine their attention to those duties. Perhaps the hardest task is that devolving on the Whips, for it is their duty to arrange the competitors into heats and hand them over to the Marksmen and Starters several minutes before the scheduled time of the race. Confusion is avoided if each competitor has a list of his events marked on his number card, which should be securely fastened to his vest.

The Judges also have a difficult task, especially in the sprint races. It is no easy matter to pick out the first, second, and third when the competitors in a race finish in a "bunch" If the judging is done in a casual manner the sports meeting will not prove a success, for there will be many heartburnings over doubtful decisions. If possible, the duty of naming first, second, or third runner should be allocated to the same judge throughout the meeting.

The ladies and gentlemen acting as Judges should preferably be unconnected with the actual working of the school Managers of the school and friends of members of the staff have been found to perform these duties admirably.

The importance of the work of the Record Keepers must not be overlooked. Their duties are manifold They supply the Judges with the bundles of tickets which are to be handed to the

winners of the various races. They chronicle all results after receiving these tickets from the winning competitors, and if "house" or "team" points are awarded for the various races they compile a schedule of points so that the respec-

FIG. 4
The Team Race
Ready for the "take-over."

tive positions of the competing teams are known at any moment.

Adequate arrangements should be made to provide first aid in case of need. The attendance of the school nurse, or an efficient deputy, is a vital necessity at a sports meeting.

Training

Although our Junior children are too young for arduous, intensive training, as the athlete knows the term, there is a real need for instruction in the elementary technique of athletics.

It is much easier to follow correct methods from the beginning than to have to remedy bad faults and habits later on in the young athlete's career. The children have gained some knowledge of style in their physical training lessons. Now is the time to put theory into practice.

They should be encouraged to practise body control and breathing exercise, they should learn that proper bodily poise and correct arm and leg movements are essential to speed.

The children should be encouraged to practise for their events, but they must be warned against over-doing their training. This applies, perhaps, more to boys than to girls. A boy, if

left to himself, will often run himself out in traversing half a mile in preparation for a sprint. Sharp bursts over distances shorter than the actual race, with a gradual "ease up," afford the best practice.

If the children are taught to run with head slightly forward, to run straight, not to relax effort when leading, and to finish "all out," they will lay the foundation of a good style.

Time-table

If the list of entries is a large one there is urgent need for a time-table. The Sports Secretary, when arranging his programme, should so order his events that the track is clear for relay and team races, and since field events take place at the same time as track events the entries must be so restricted that a competitor is not wanted in two places at once. To overcome this difficulty the list of events should be divided into sections, and competitors should be allowed to enter for one or two races only in each section (see note above Regulations).

Provision should be made for separate tracks
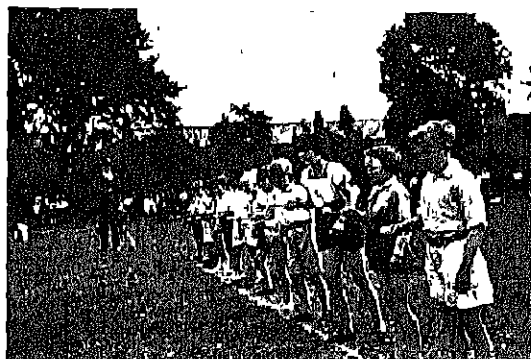
FIG. 5
The Egg and Spoon Race

in order that events for boys and girls may be decided simultaneously. The preliminary heats and finals may be run off at intervals of two or three minutes, and under these conditions it has been found possible to complete a school sports programme comprising 1,800 entries in two and a half hours.

The Sports Field

Fig. 6 shows how a field may be set out for Sports Day. It will be noticed that there are five tracks: an oval track for team and relay races, two sprint tracks, and two for the novelty events. The oval tracks may be defined by means of small flags. The length of this track will, of course, vary according to the size of the field. In the diagram the oval track measures roughly five laps to the mile. The starting place and finishing point of the various events should be clearly marked. Football flags may be used to indicate the novelty tracks, and post cards fixed to wooden pegs make useful markers for handicaps.

The Whips should be provided with large blackboards and the competitors should be instructed to line up for their races when their event numbers are indicated on the Whips' boards.

A wise Secretary will compile a list of apparatus and equipment required and will check each item before the commencement of the sports.

The Team Spirit

The matter of giving prizes at school sports meetings is one to be left to the discretion of the teachers concerned. It will be sufficient to say here that very successful gatherings have been held where a "house" or team trophy has been competed for. Keenness and enthusiasm have been the keynote of the day and the children have learned to win with modesty and to lose cheerfully.

If they are encouraged not to seek individual honours but to strive their utmost for the honour of their "house" they are learning in their early years that valuable lesson which will stand them in good stead in later life—the real meaning of " Play the game !"

EMPIRE DAY

The celebration of Empire Day stands out pre-eminently as the most generally observed of all school activities. Whether the observance takes the form of a pageant or of the more common "March Past," a splendid opportunity is offered to inculcate the great moral lessons of "Each for all" and the meaning of good citizenship. This is the day when the children learn the import of "a common tie" and the value of unity : justice, peace, and goodwill provide the theme for the day rather than the ultra-patriotic "Confound their politics! Frustrate their knavish tricks !"

The significance of this day is best brought home to the children if all are allowed to participate actively in the celebration.

Pageant of Empire

A series of tableaux representing the Motherland and various parts of the Empire provides an excellent method of celebrating Empire Day in a Junior School.

Britannia, surrounded by Boy Scouts, Cubs, Girl Guides, Brownies, and members of kindred organizations, forms the centre of the display.

English, Welsh, Scottish, and Irish dances by boys and girls in national costume follow, and then appropriately garbed representatives of the various Dominions and Dependencies make separate entries and group themselves round the central figure of Britannia to form an effective final tableau.

Empire Marketing Board posters may be used to form a border for the central platform and in order to render the various representatives more easily recognizable they may carry the chief products of the part of the world they represent. Here the children may exercise their initiative and ingenuity to obtain specimens of the products of the Dominions.

After an address by the Head Teacher and songs by the whole school or the school choir, Britannia holds "The Flag" aloft and all the pupils take part in the "March Past" and "Salute."

The function terminates with "God Save the King."

SUGGESTED PROGRAMME

Opening Hymn

"O God, our help in ages past."
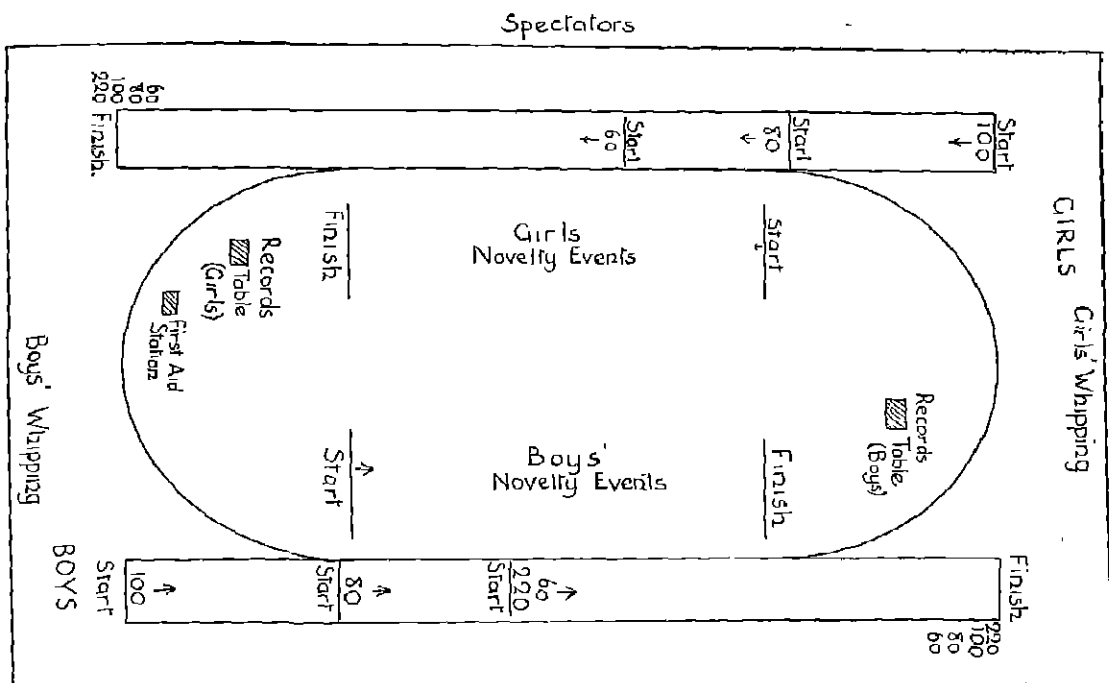
Fig. 6

Suggested Lay-out of Sports Field

1 lap = 350 yd
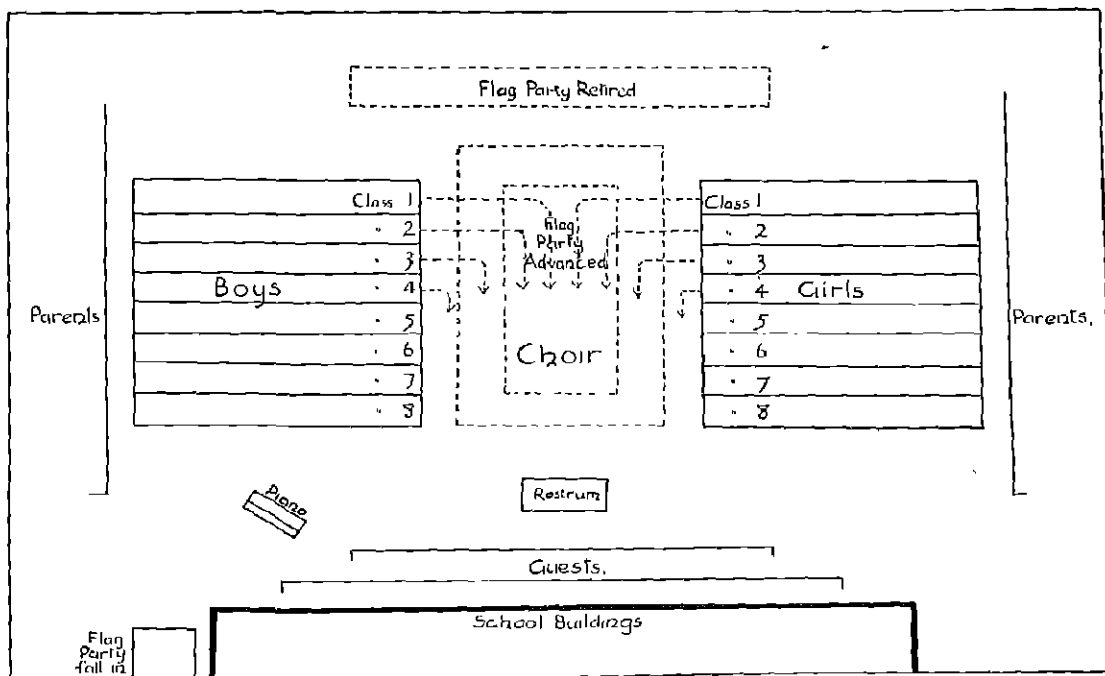
Fig. 7

Suggested Playground Positions for Empire Day

PAGEANT OF EMPIRE

Song: "Land of our Birth" (*Boys and Girls*).

Address · The meaning of Empire Day.

Song: "It comes from the misty ages" (*Girls*).

Song: "Glad hearts adventuring" (*Boys*)

MARCH PAST AND SALUTE OF THE FLAG.

GOD SAVE THE KING

A Flag Party

Another, though more formal, method of celebration is to arrange a Flag Party and a Guard of Honour, comprising Scouts and

SUGGESTED PROGRAMME

1. Assembly.
2. Entry of Flag Party and Guard of Honour.
3. General Salute.
4. Flag Party and Guard of Honour retire
5. School choir occupy centre of playground.
6. *Hymn:* "O God, our help in ages past."
7. *Address.*
8. *Song.* "O England, my Country"
9. *Song.* "There's a Land" or "Recessional" (Kipling).
10. Flag Party and Guard advance to centre.
11. Cheers.
12. *God Save the King*, and Grand March Past.

FIG. 8

The Welsh Dance

FIG. 9

The Salute

Cubs, Guides and Brownies, as the central group.

The boys and girls are ranged in classes on two sides of the square, which is vacated by the Flag Party and Guard of Honour while the school choir renders songs. Room may be kept for parents on either side of the playground.

A General Salute precedes national songs rendered by a picked choir or by the whole school Then follows an address on some topical subject such as "Play the Game" or "The meaning of Empire Day."

A Grand March Past concludes the display.

Example of Address by Head Teacher

"I want to say just a few words about the real meaning of Empire Day. As you know, we have kinsmen, relations, in all parts of the world and on this day all British peoples join together to celebrate their unity Several years ago wise men thought it would be a good idea to set apart a day when we could specially think of our brothers and sisters in other lands, when we could specially remember the common tie which holds us together. Finally the 24th May was

chosen as Empire Day This day, the anniversary of the birthday of Queen Victoria, was chosen because it was during her reign that the British Empire grew so important

" Listen to these words spoken some years ago by King George, specially for school children,

FIG. 10

The Flag Party

and recorded at Buckingham Palace by His Master's Voice Gramophone Company—

Each of our people has his own life to live. Each of our people has his own work to do Yet all are members of one family, sharing their sorrows and joys. You have learned how the Empire was built up by brave and wise men and women in the past It is only by courage, wisdom, and unselfishness that it will endure. It is a great inheritance Your fathers and forefathers made it. Its future welfare and good name are in your hands

" In a moment we are going to sing about our country—'What heroes thou hast bred, O

England, my Country.' We cannot all be heroes, but we can all strive to be brave and honourable and kind, thinking of others before ourselves. We can always try to play the game.

" If we cheerfully shoulder our responsibilities, if we are prepared to do for our country what

FIG. 11

The March Past

we would do for our fathers and mothers, if we try to do at least one good action every day as these Scouts and Cubs, Guides and Brownies are taught to do, then we shall become citizens worthy of this great Commonwealth of free nations.

" As you march by and salute the Flag I want you to remember that you are all members of one big family· I want you to resolve that you will do your duty with all your heart and soul and strength."

EXHIBITION OF HOBBIES

*Absence of occupation is not rest,
A mind quite vacant is a mind distressed*
                    COWPER.

An annual exhibition of models and collections of various kinds made by the children in their spare time is one of the most interesting of school activities and proves a valuable aid in bringing home and school closer together. It may be held on Parents' Day or an afternoon may be wholly devoted to it. An exhibition of children's hobbies requires but little organization on the part of the teacher. After months of

careful preparation the models are brought to school by the children on the appointed day and arranged on tables in the school hall. A separate table is allotted to each class and the arrangement of the exhibits is a simple matter

Adjudication for prizes for the best pieces of work is a difficult and delicate task.

Competition for "house" or "team" marks promotes a healthier spirit than the award of individual prizes and, if possible, the judge or judges should not be connected with the school.

It will be found necessary to classify the

exhibits. The following classification has proved satisfactory—

1. Ingenious models and those costing very little for material.

2 Exhibits reflecting school work but constructed at home, e g. book-binding, raffia work, doll's clothes, garments.

judges is anxiously awaited, and the announcement of the name of the winning "house" causes great excitement, particularly among the members of that "house", the other children are spurred on to greater efforts in the future.

The school which holds a Hobbies Exhibition will hold others, the enthusiasm of the children
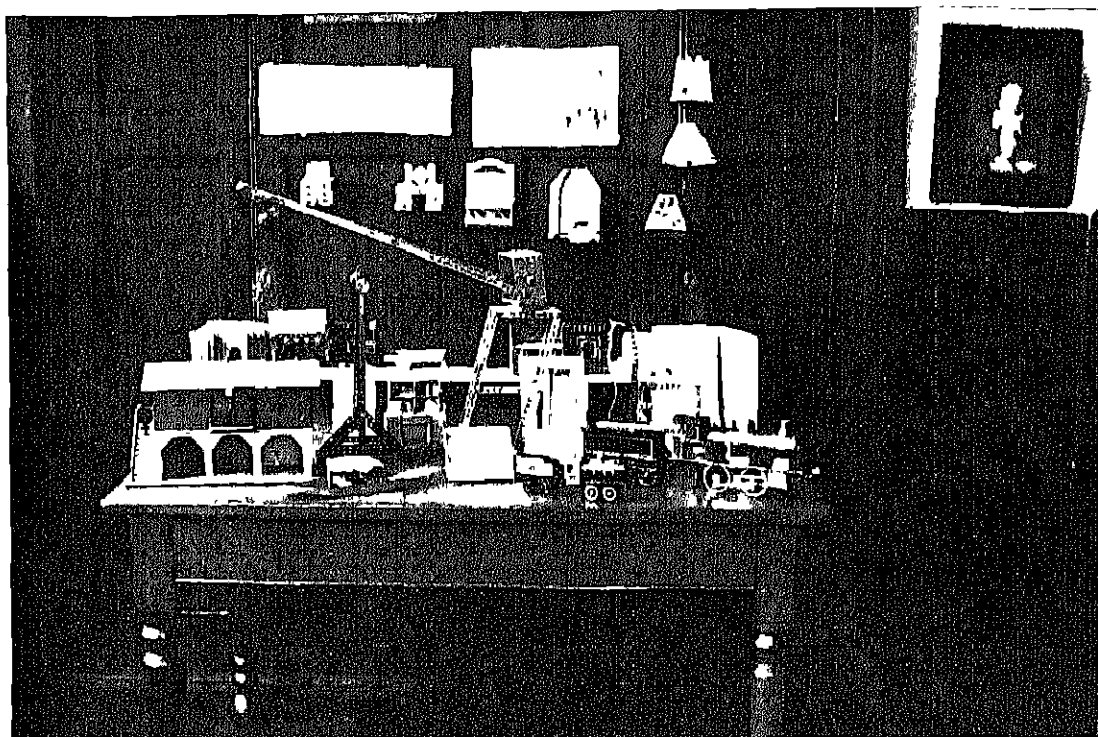
FIG. 12
Exhibition of Hobbies
Class 2.

3 Purely mechanical models, e g. Meccano.

4. Collections of stamps, orange wrappers, match-box covers, pressed leaves, etc.

5. Fretwork and other exhibits.

Each model or collection should bear the name and age of the competitor, the section under which the exhibit is entered, and the "house" to which the competitor belongs.

The totalling of the marks awarded by the

is aroused the "mind quite vacant" is awakened and, above all, the teachers learn a great deal more about their children and their aims and activities than ordinary school contact alone can give. The teacher will more fully realize the value of self-development and the children will learn to—

Shun idleness it is the rust that attaches itself to the most brilliant metal —VOLTAIRE.

A GRAMOPHONE RECORD LIBRARY

The value of the gramophone in schools is acknowledged by all teachers who desire to encourage musical appreciation, for even in the school which is fortunate enough to have proficient pianists and singers among the members of the staff, the gramophone provides a valuable adjunct when an appreciation of instrumental music is the main idea of the lesson.

The chief difficulty is to procure a supply of records adequate for using the gramophone to the best advantage. It is impossible for the individual school to possess sufficient records to cover a wide range and those loaned by the children are generally unsuitable in character.

An attempt to solve this problem has recently been made by the Shoreditch Schools Musical Association, and a brief outline of the methods adopted by this pioneer association to form a circulating library of gramophone records may prove helpful in other districts.

The nucleus of the library was purchased with the surplus money from the proceeds of a district concert.

All schools in the district were invited to participate in the movement and heads of departments were requested to compile lists of records which they could recommend.

A small selection committee was appointed to make the final compilation.

Method of Selection

Individual needs differ widely but the following were the broad principles underlying the selection—

I. The main aim of the library to be—
1. To train intelligent listeners.
2. To provide a definite, though simple,

teaching of technique and the respective values of the instruments of the orchestra.

3. To encourage an appreciation of really good music, the work of acknowledged masters.

II. Recreational periods not to be overlooked; records of lighter music may have their place.

III. Records for folk dancing and marching to be included. Teachers are fully appreciative of the definite place taken by Folk Dances in the school curriculum.

The First Selection. To enable all those who wished to participate to get a fair selection a large number of records was ordered under two headings—

Instrumental	Vocal
Orchestra	Song.
Solo Instruments.	Vocal Choruses.
String Quartets.	Operas.
Military Bands.	
Folk Dances.	

The Librarian

The Committee appointed a Librarian, whose duty is to compile a list of records and to keep an Indexed Catalogue. Copies of these are cyclostyled and supplied to the interested schools.

This circulating library of records is now in full working order. Each school forwards a monthly requisition to the Librarian and the varying needs of the schools are met as far as possible. Stout carriers (9d. each) are provided, each holding five records.

The surplus funds of the district concerts will be devoted to extending the range of records and to replacing or duplicating those most in demand.

OPEN DAYS

The Happy Junior School

During the last thirty years wonderful strides have been made in the psychology of the child mind. It is a fact recognized by eminent

educationists that children should and must be happy, and that a successful school is without exception a happy school. All those who control and have the important making of children's destinies should have within themselves the

spirit of joy Our wonderful schemes of reorganization and instruction are bound to fail if we ignore the all-important factor of joy and happiness.

Self-control and self-restraint are and always will be necessary, but our pupils should be given periods in which to abandon themselves to song, movement, and light-heartedness. The teachers and pupils should share a common joy and a common happiness.

The school curriculum should include Open Days, Sports Days, School Concerts, Handwork and Needlework Exhibitions, Drill Displays and Competitions, Flower Shows, Bulb Shows, Swimming Galas, and, although not sanctioned at present, the School Journey and "One Day" Educational visits.

The Open Days are rapidly becoming an indispensable part of the school organization. With the rapid progress of education there has come about a better understanding between the parent and the school teacher. Modern ideas have resulted in increased facilities for intercourse between the home and the school The majority of parents nowadays regard the teacher more as a friend than as an enemy. The child's education depends to a great extent upon this relationship, and it is the duty of the Head Teacher to make this intercourse possible.

Open Days are very often adversely criticized. Those who are not favourably disposed toward them think that they foster a love of display and accuse them of interfering with the normal working of school. But the advantages gained outweigh these criticisms.

Invitation to Parents

It has been found a good plan to open the school to parents and friends on two afternoons rather than for one whole day. The working-class Mother is never free for a whole morning In a very large school it has been found practicable to allow the lower classes to invite their parents on one afternoon—say Tuesday—and the upper half of the school to invite theirsthe following day—Wednesday afternoon. The Head Mistress of a particular school also sends invitations to the Head Teachers of neighbouring schools, especially to those concerned in the

Reorganization Group. An invitation is also sent to the Head Teacher of the Central school to which the Juniors proceed, and also to the Head Teacher of the local Secondary School. School Managers and friends are also invited Each child writes the invitation on a sheet of paper and takes it home for the parents, and fathers are specially welcomed.

Handwork Exhibition

The preparation for this type of Open Day does not interfere with the ordinary school work. The work to be exhibited is collected gradually over a period of nine to twelve or fifteen months. As each specimen is finished it is graded and labelled with the name and age of the scholar, and stored in readiness for the Exhibition.

Arrangement of the Central Hall

An Exhibition of this kind mentioned above should only be attempted when there is a large hall in the school. Tables on which are examples of handwork, including baskets, weaving, rug-making, simple book-binding, needlework, embroidery, and other crafts, are arranged round the hall. This gives an impression of the work of the school as a whole.

Chairs can be arranged two or three deep close to the walls to enable the parents to sit down and chat for a few minutes—generally about "the work of my Rosie" and "have you seen my Florrie's needlework?"

In a very large hall it is sometimes possible to have a dozen children engaged on different branches of handwork. Suitable handwork tables can have four children working at basketry, four at raffia weaving, and four at stool caning, or the seating of stools with sea grass.

This evidence of self-display can easily be led into safe channels by the wise teacher.

Meanwhile there is an intermittent stream of parents, some of whom were taught in the same school as their children whose work they are now viewing.

Exhibitions in the Classroom

In some schools where the hall does not permit of a display, the Open Day is organized in

the classrooms and this is at once the class teacher's province. A proceeding such as this permits of inquiries concerning the progress of individual children. The parent is very personally interested here, and the variety of treatment and arrangement of the classroom is very interesting to the parent who has two or three children in different classes of the school. Outside the classroom door should be printed the name of the teacher and designation of the class, and then the parent has no difficulty in locating the whereabouts of any particular child.

A short address given by the Head Teacher, preferably at the end of the afternoon, makes a feeling of pleasant co-operation between school and home.

A Suggested Experiment in Co-operation

An invitation can be sent to the parent to attend—

1. Once a fortnight, 5.30–6.30 p.m. for Community Singing.

2. Twice a year for a short address from the Head Teacher when children attending the Junior School proceed to the Senior School

THE "DAILY EVENT" NOTICE BOARD

In a Junior School accommodating pupils from 7 years to 11 +, much time and labour would be involved in order to produce a class or school magazine. Even if the magazine is written and illustrated by hand it has its limitations, as in the case of Juniors valuable time would be spent in correcting and arranging the efforts of scholars.

But even in a Junior School there is a need for a periodical devoted to class, school, local and general news, both English and foreign It is possible to have a "daily event" notice board in the Hall, where even the youngest scholars can have a good view of it. *The Times*

newspaper will present to any school that cares to apply for it a green baize notice board. This board can be divided into columns devoted to "Yesterday's News " An editor for each section can be appointed to collect and select suitable contributions for the board. Pupils of 10 and 11 years of age, generally in the top class, will be chosen as editors.

In one school the Head Teacher always supplies the picture page from *The Times*, and the weekly picture page from *The Times Educational Supplement*. The pupils, too, are very keen, and are always on the look out for suitable pictures.

NOTICE BOARD

Pictures English and Foreign	News Cuttings	Class and School Notices	Weather Reports To-day's Anniversary, etc., etc.

THE WHOLE DAY EXCURSION

A journey taken during school hours should be of real educational value, and "open air" education has proved itself to be necessary in the organization of school life The study of history, geography, science, and Nature study can be promoted by it

A favourite whole day excursion for many schools in the London area is a visit to Kew Gardens, particularly in the spring.

A suitable number of pupils is forty and two mistresses or masters in charge. The method of approach could be District Railway, motor-bus,
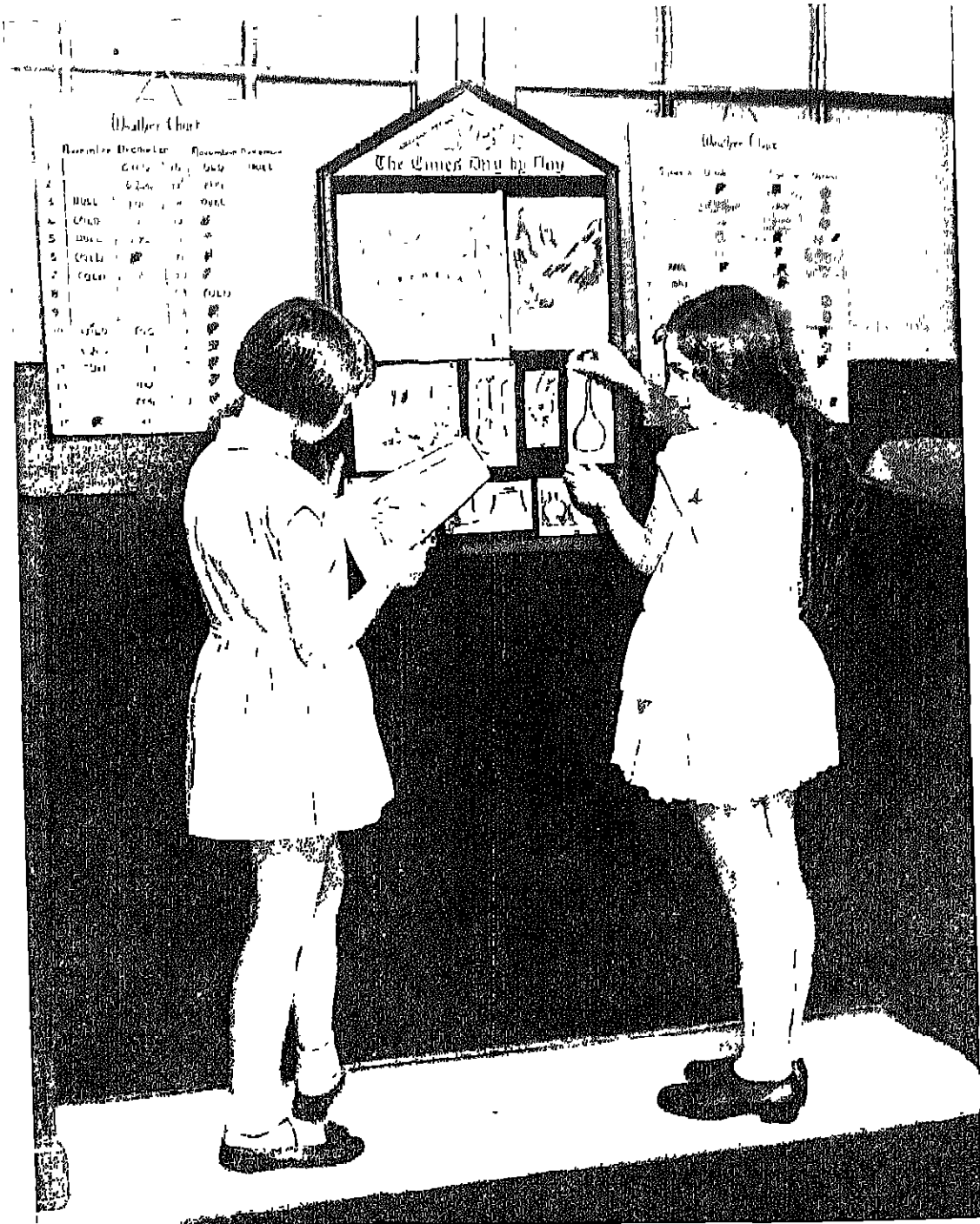
FIG. 13
The School Notice Board

or motor-bus and latter part by tram The main gate is on Kew Green, but there are five other gates. The Cumberland and Victoria Gates on the eastern side afford the nearest entries from Kew Gardens station on the District and North London Railways.

Preparation Before the Journey

A preliminary talk about the place to be visited is necessary. Nature study, plant, and tree life will be emphasized in this case. A plan of the gardens should be made on the black-board and copied by the pupils. The gardens cover an area of 288 acres, the greater part being occupied by collections of trees and flowering shrubs. The north-east part is the site of the original Botanic Gardens, and it is devoted to the collection of herbaceous plants and to the glass houses.

The extreme south-west corner of the gardens is known as Queen's Cottage Grounds and is kept as far as possible in the condition of a natural wood A short lesson should be given on historic evidence, the origin of the gardens, Kew house, the Sundial, Museums, the Lake, Queen's Cottage, and grounds.

Organization of the Visit

The visit should be so organized that it makes for mental thoroughness, idealism, and bodily health. There should be a spirit of freedom and naturalness about the whole proceedings, and the children should enjoy it There should be an hour or two's rest when the pupils can have

their lunch and get a vision of the natural world as revealed by wind, sky, green slope, and grassy mound as an educationist has said—

One of the dangers of the classroom, especially when classes are large and the accommodation not all that can be desired, is that interest may never be brought to

FIG. 14
Making Notes in Kew Gardens

ripeness and idealism may never be born. A touch of the wind upon the heath; a glimpse, from a camp set on a green hillside, of golden sunrises and purple sunsets gloriously dawning and fading among the hills from which cometh our physical and spiritual help; a vision of the men and women of old days striving to build up a world of order and beauty from the chaos of human things those events create, as nothing else can create, both interest and idealism, and give the class-room work a unity and a reality that, at any rate to the immature mind, is impossible to secure in any other way

SCHOOL JOURNEYS IN THE JUNIOR SCHOOL

As the new Junior School progresses, and pupils of 10 and 11 years of age gain in responsibility, the question of School Journeys and "one day" educational visits will have to be considered seriously as part of the curriculum. With the immense growth of the Brownie and Girl Guide and Boy Scout movements, pupils of 10 and 11 years of age possessing average intelligence may safely be taken on these journeys.

With the reorganization of schools there is a danger that certain activities which were very

popular in the pre-Hadow Schools may be denied to pupils in the upper classes of the Junior School. It would not be advisable to include mentally retarded children in the scheme of School Journeys when they are under 11 years of age In the *Suggestions for the Physical Welfare of Pupils in School Journeys*, published by the London County Council, Rule 2 states the following—

Those pupils should be selected who are most cal-culated to benefit by the journey For instance, they

should not, as a rule, be under eleven years of age.
They should, as nearly as possible, be equal in age,
attainments, and physical strength

Before the schools were reorganized, boys and girls who at the age of 10 and 11 had reached the Upper Standards, V, VI, and VII (and a considerable percentage in an average school always do) were included in the school journey organized in their particular school. Now these journeys, as well as the "one day" educational visits, created a most healthy atmosphere throughout the school, and even the youngest scholars were thrilled into rapt attention at the preparations which were necessary. A pleasurable anticipation of the day when they could take part in a visit created a great happiness in their young hearts Is this to be denied them? Are they to hear nothing of School Journeys—historical, geographical and Nature study visits? When they are transferred to the Senior or Central School they may have to wait another two or three years before they can be included in the lucky "thirty or forty." The training which is so necessary an accompaniment of these visits will suffer in consequence, Evidently lack of provision for School Journeys and educational visits for the Junior School is a drawback in reorganization.

It is understood by many who are interested in the movement that the matter is being seriously considered by the Board of Education, and regulations which are now in force may be removed as the new organization develops. Children in a reorganized school are frequently taken on educational visits out of school hours by their keen teachers, and as far back as twenty years ago, it is a known fact that keen young teachers, a year or two out of College, have taken a dozen or two small boys and girls to the Zoological Gardens, Museums, and Tower of London. Teachers with enthusiasm for the "open air" teaching can quickly surmount their difficulties.

Girls and boys in the Junior School have now to undertake the responsibility which was given to children of 13 and 14 years of age. They have to act as prefects, class captains, and team leaders, and it is truly astonishing how wonderfully well they accomplish these duties School Journeys are essential for these young people.

The School Journey Movement

(See School Journeys published by the London County Council, price 6d. This pamphlet may be purchased from P. S. King & Son, Ltd., 14 Great Smith Street, Westminster, S.W. 1)

The following facts may be interesting to keen enthusiasts of the School Journey Movement who are desirous of getting them extended to the Junior School—

1. The School Journey proper was evolved in 1896. In that year Mr. G. G. Lewis, an assistant master at Bellenden Road School, took a party of pupils to Malvern for a week during the Summer Holidays, equipped with an educational programme and with a guide book prepared for the occasion.

2. In the same year a Liverpool teacher, Mr. H. Edwards, organized a fortnight's trip to the Isle of Man. Other teachers followed.

3. In 1905 School Journeys received official sanction, but this approval, however, related only to those journeys which could be completed during the course of a single day.

4. In 1906 the first extended excursion to receive official sanction was that undertaken by St. Bartholomew the Great School, when a party of pupils was taken to Shalford, near Guildford.

5. In 1908 School Journeys were provided for in the Board of Education Code and recognized as attendances at School. In 1908 there were five School Journeys: in 1929 there were 480.

6. In 1911 the School Journey Association was formed and its work furnishes a fine illustration of enthusiasm and comradeship. Its objects may be summarized as follows—

(a) To advocate the School Journey as a desirable factor in the education of the child.

(b) To promote the collection and interchange of information relating to the organization of School Journeys.

(c) To bring to the notice of the Board of Education and Local Education Authorities, suggestions designed to facilitate the promotion of these journeys in school time.

(d) To obtain special concessions from railway companies, caterers, and those in charge of places of educational interest.

(e) To assist in the formation of local associations in the provinces and to affiliate such associations.

A School Journey Planned on the Hostel System

The success of a School Journey is largely determined by efficient preparation and planning beforehand Added to this, it is most necessary to prepare for contingencies and keep Robert Louis Stevenson's favourite virtues ever before one—*Kindness and Cheerfulness.*

Advantage of Hostel Accommodation. The character of the housing accommodation depends on the state of finance. The Hostel is to be preferred because all the pupils can be housed under one roof and in the case of Junior pupils efficient supervision is absolutely essential. With Senior pupils it is sometimes possible to manage with a camp or cottage homes.

The Financing of School Journeys. This is very often an acute problem especially in the case of very poor schools (see Cost of School Journeys in London Elementary Schools in the L.C.C. publication *School Journeys*).

In 1908 the cost of five school journeys was £150.

In 1929 the cost of 480 school journeys was £45,720

It will be seen the cost to the ratepayers in 1908 was almost negligible: in 1929 a contribution of £14,000 was made by the Council and cost have since increased still further.

Nearly every Primary School needs assistance in different ways. In many schools small subscriptions are taken weekly throughout the year, and in others jumble sales, school concerts, and sales of work are organized.

Practical Suggestions

Whatever the type of housing selected it is necessary to strive for the following practical suggestions—

1. *Sleeping Arrangements.* Single beds are advisable Rooms or dormitories should not be overcrowded and they should be well ventilated

2. *Recreation Room.* A room for the purpose of recreation is *absolutely* essential, especially on wet days. It can serve the purpose of a classroom as well and should, if possible, contain a piano

3. *Sanitary Arrangements.* These should be very satisfactory and proper facilities for bathing the children are necessary.

4. *Catering Arrangements* The food supplied must be plain and there should be plenty of it. If sandwiches have been provided when the children have taken a whole day journey, they must be provided with a hot meal on their return.

A Specimen School Journey Suitable for Pupils in the New Junior School

Age of pupils   9 to 10 years.   20 pupils.
                   10 to 11 years   20 pupils

In the regulations and instructions for School Journeys the following rule is stated—

A time-table of the journey and a syllabus of work must be sent to and approved by the District Inspector A copy should be forwarded to the Education Officer after approval

Kind of Preparation Necessary in the Junior School

It must be emphatically stressed that the whole preparation for a Junior School Journey must in no way be overdone. It would be well to remind our enthusiasts as to the function of the Junior School The three R's and fundamentals must not be neglected in any way when preparation—an absolute necessity for the School Journey—is being carried out. The children must play an active part in the preparation of the guide-book, which must be as educational and as simple as possible. A showy and overcrowded guide-book will do more harm than good in a Junior School.

Points to be Remembered when Planning Expeditions

In the *Suggestions for the Physical Welfare of Pupils—School Journeys,* the following important rules are stated—

Rule 4. Long or tiring excursions should not be undertaken on successive days ; a day's rest should be given after a long expedition

Rule 5   During an expedition the form of exertion most natural to boys, i e short tramps, should be followed by longish rests, and the rests must be complete, with relaxation, and not filled in with brain work as is often the case

These rules must be *strictly* kept in the case of Junior pupils, as they need plenty of rest. A strenuous day should be followed by a very slack one, and tiring games and aimless running about should be avoided.

The Railway Journey

We leave Victoria Station, a terminus of the Southern Region of British Railways,

FIG. 15

Searching for Pond Life

and very soon cross the Thames to Clapham Junction, one of the busiest railway junctions in London. We proceed through Mitcham, with its beds of lavender, to Hackbridge, with its dogs' home and quarantine station, and then to Sutton. When passing through Epsom look out for the race course. Soon after passing Cheam we come to Ashtead Woods Between Leatherhead and Dorking the river Mole burrows under the Downs—hence its name. We also burrow here, emerging into a richly timbered district with Juniper Hill on our left, succeeded by the outlines of the North Downs of Surrey. From Holmwood we may see Leith Hill on the right, the highest point in Surrey (nearly 1,000 ft). Near Pulborough, which is much frequented by anglers, the river Arun is joined by the river Rother A few miles ahead of Pulborough we shall see the South Downs Soon we see Amberley Castle on the left—it has been here since Norman times. Next we steam under a short tunnel and come out on the edge of Arundel Park. Look out for the Castle

At Ford Junction or Arundel we change trains, and a short journey of a few miles brings us to our destination—Littlehampton.

Littlehampton

Ages ago our country was joined to the continent of Europe, so that people could walk across this part of the great European Plain. It was the lowest part of the plain, and in time it sank below the level of the ocean, and water flowed over its surface But this was before the days of history—in prehistoric times.

The earliest mention we can find of Littlehampton is in Saxon times, when a village called "Anton" stood on the coast. "Anton" meant "water," and it has now become "Hampton." It is Littlehampton because it has always been a small place with few inhabitants. This Saxon village stood where the old town now is and behind it, so that the spot is now a long way back from the water's edge. How can we account for its not being on the coast at the present time? The new town, the common, and the sands used not to be here at all.

Two forces have been at work on this part of the coast to change its shape. The river Arun has been carrying down mud and chalk from the hills and depositing them at its mouth, and the bed of the channel has been washed up by the water to add to the land. These changes have been going on during the hundreds of years since the Normans came.

Every day changes are taking place still; for example, parts of the coast which are soft are being washed away, while other parts are being built up If we like to go farther back still into dim and distant ages, geologists tell us that the chalk hills of the Downs once formed the bed of the ocean. This they know because chalk is the remains of shell fish, and it must have come from the sea.

The Seashore

1. *Shells.* Search for and keep a specimen of each kind of shell Arrange them in two classes.
  (a) Univalves (one shell).
  (b) Bivalves (two shells).
The most common shells are—
Limpets—found adhering loosely to rocks.
Whelks—very plentiful.
Cowries—used as a medium of exchange in some countries
Periwinkles—may be yellow.
Tops—so called from their form.
Cockles—lie buried under the sand.
Razor shells—razor spends its whole life in burrows
Mussels—adhere to rocks.
Scallops—very common.
2. *Eggs.* Look out for—
Eggs of whelk—like a dingy bony comb.
Sea grapes—eggs of cuttle fish.
Eggs of dogfish—notice long curling appendages.
Mermaid's purse—skate's eggs.
3 *Seaweed.* Secure specimens for mounting of—
Bladder wrack—(Why so called?).
Knotted wrack—used for packing shell fish.
Oar wrack.
Note. Among the many other things to be seen are: the five-fingered star fish; the sea urchin, sometimes called "the sea hedgehog"; crabs—the unedible green crab, the pugnacious edible crab, and the hermit crab; the lug worm; jelly fish, shrimps, sand hoppers, and sea anemones.
Fig. 16 shows examples of the treasures of the beach

Arundel

Arundel was originally the property of Earl Godwin and Harold. It was bequeathed by William the Conqueror to Roger de Montgomery, who led the Breton troops at the Battle of Hastings in 1066. In 1274 it passed to the Norman family of Fitzalan, whose representatives held possession for over three centuries, when their heiress conveyed it by marriage to the Howards, whose present head, the Duke of Norfolk, is Earl Marshal, Premier Duke, Premier Earl, and Premier Baron of England.

The castle occupies what was once an almost impregnable site on the summit of a precipitous cliff. It has stood three great sieges, during the last of which it was laid in ruins by a Parliamentary Force. This was in 1644, during the Civil War. It has, however, been carefully restored, with the result that to-day the castle is more glorious than ever, and is only exceeded in grandeur by the Royal residence at Windsor.

In the Domesday Book we can read of "Harundell Castellum." Only a part of the ancient fortress now remains, the most striking of which is the Saxon keep, a large round tower on an artificial mound. Its walls are 17 ft. thick at the base, and broken parts which you see at the top are the traces of the Civil War

The park is open to the public except during one day in the year On this day it is closed, lest what is now a privilege should become a legal right.

The River Arun

The Arun is the longest of the rivers of Sussex. Rising in St. Leonard's Forest, in the neighbourhood of Horsham, it receives near Pulborough the waters of the Western Rother, the most beautiful river of Sussex. It afterwards passes Burpham and Arundel and flows into the sea at Littlehampton. The Arun is navigable for ships as far as Arundel, and for barges for a much greater distance.

In bygone days the estuary of the Arun was far wider than it now appears. Where are now hundreds of acres of green fields there used to be alternately a wide expanse of water and of mud flats, while the tide flowed inward as far as Angmering Church. The ships that now come are mostly laden with coal from the northern ports of our own country Near Arundel, as the river bends, different views of Arundel Castle may be obtained.

Burpham, our destination, is a few miles north-east of Arundel. Here we get a splendid view of the hills and valleys of the South Downs Notice of what the hills are made, and see what treasures you can find.

On the homeward journey notice where the sun is, and get a good look at the harbour of Littlehampton.

Egg of Skate

Razor Shell

Whelk's Eggs

Egg of Dog Fish

Whelk

Limpet

Periwinkle

Top

Cowry

Mussel

Scallop

Knotted Wrack

Bladder Wrack

Oar Wrack
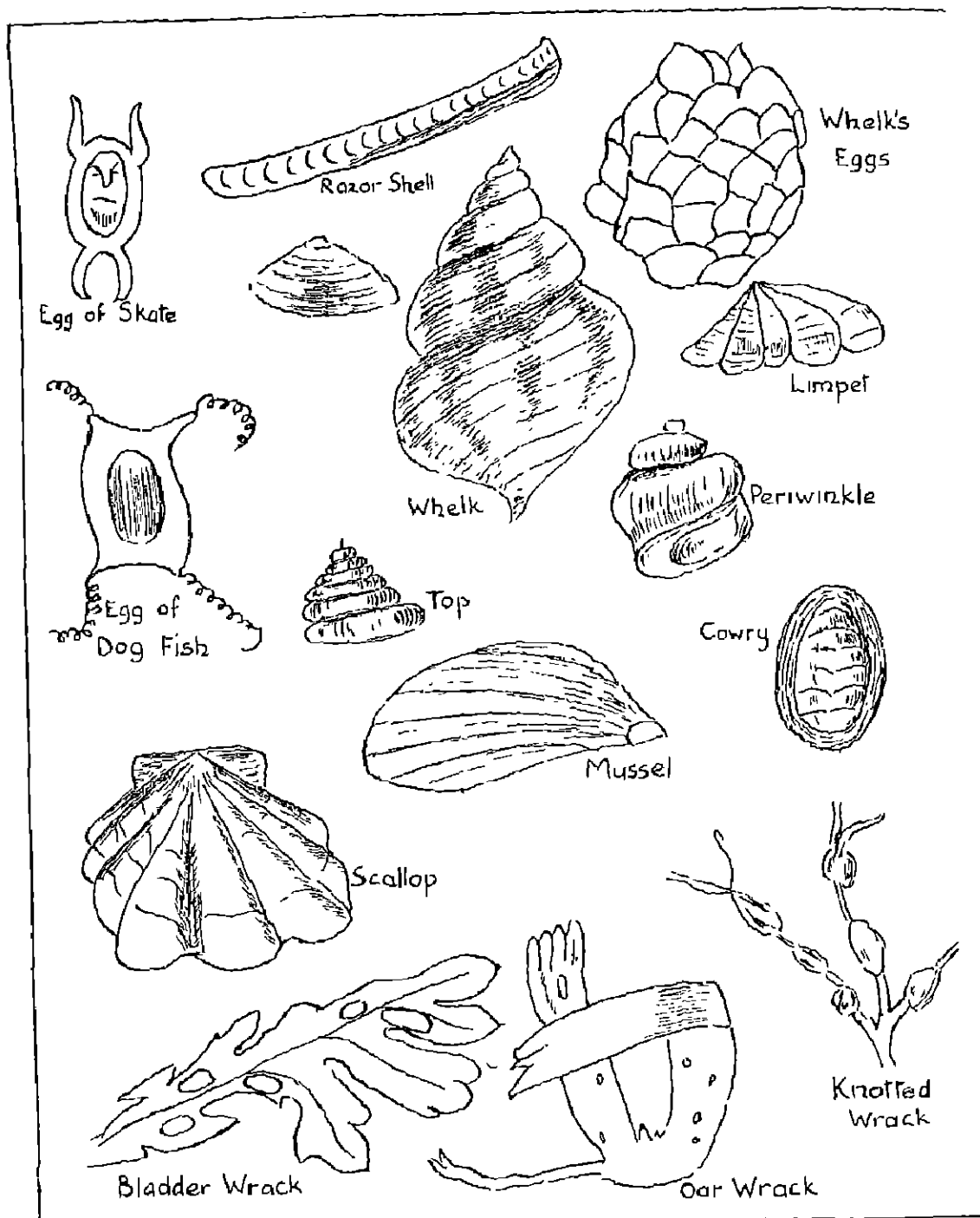
FIG. 16

Treasures of the Beach

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PUPPET MAKING

THE making of puppets is a skill readily acquired, and the teacher who has had no experience with their construction need not hesitate to embark on this most valuable craft, with its great potentialities, with children of any age.

The Puppet

A puppet consists primarily of a head operated by one or more fingers of the hand, the finger being inserted in the hollow neck. The head is preferably made completely hollow, and of suitable durable and light material, such as papier maché. To the neck is fastened an undergarment of soft material, somewhat similar in shape to a nightdress. This covers the wrist and fore-arm of the operator, which would otherwise be visible to the audience. To the sleeves of this undergarment are attached the puppet's hands, and these, by means of small cardboard tubes fixed inside the sleeves at the wrists, are moved by means of the operator's thumb and finger.

Manipulation

The usual method of operation is to manipulate the head with the forefinger, and the two arms with the thumb and second finger respectively. The remaining third and fourth fingers are

folded over the palm so as not to make a bulge in the dress. A method sometimes preferred, in
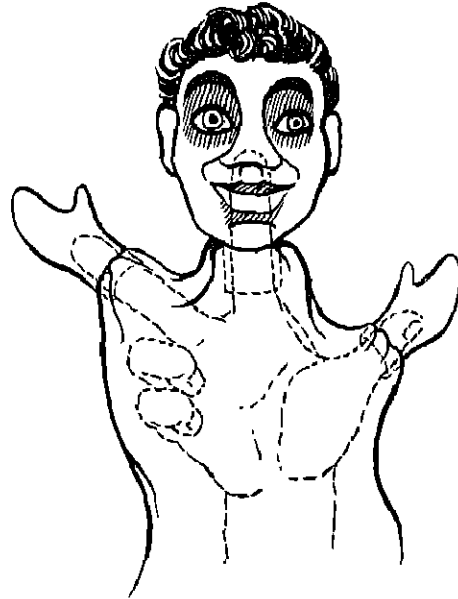
FIG. 1

Manipulating the Puppet

that it gives greater freedom of movement, is to use the first and second fingers for the head, the remaining two fingers in one sleeve, and the thumb in the other. It is possible for each pupil to operate two puppets at the same time.

MAKING THE HEADS

An excellent method, suitable for Primary School pupils, including the youngest, is to use Alabastine and bandage. Alabastine can be bought by the pound, and is a white powder to be mixed with water, immediately before use, into a paste One-inch bandage is satisfactory, and additional requirements are Plasticine and tissue paper. It is preferable to have modelling stands, consisting of a baseboard with a piece of dowel rod fixed vertically to it. If these cannot be obtained—and they are easily made—

a six-inch nail driven through the baseboard may be used.

Modelling the Plasticine

A half-pound lump of Plasticine is large enough for the first heads, expecially for the youngest children, and later on, one pound is satisfactory for all general purposes. Shape this lump like an egg, roll some Plasticine to serve as a neck, and set the thin end of the

egg firmly on the neck at an angle, pressing the whole firmly on to the stand. The neck must be slightly larger than the operating finger. The mass of Plasticine is now shaped

one-third water. When this is quite dry, repeat with a second layer The Plasticine should now be removed, a process simplified by cutting the head in halves over the scalp and down behind
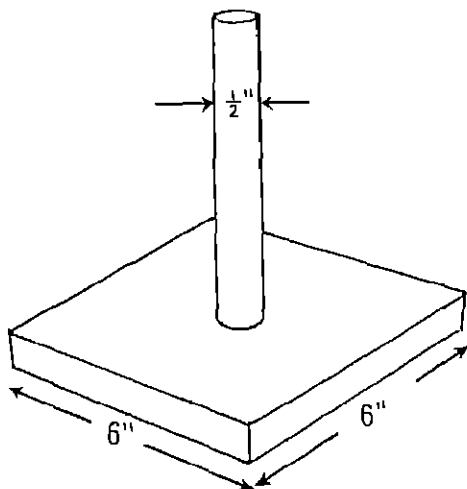
FIG. 2
Modelling Stand

into a head, and pieces are added to build up the nose, eyebrows, chin and cheekbones as necessary. Eye-sockets are pressed in about half-way between skull and chin, and half-round pieces of Plasticine placed in them to be made into eyeballs. The nose extends from eye-level to approximately a quarter-way up the length from chin to skull, and the ears are preferably shaped separately and fixed on. Bold exaggeration of features is essential, as with caricatures, and a collection of these will be found helpful.

FIG 3
Making the Head

the ears, or by cutting a slice off the back of the scalp Rejoin the pieces with glue and a few strips of bandage and plaster, and cover the head with a third and final layer. The head is more easily manipulated if a cardboard tube, which can be made from rolled paper and paste, is glued into the neck, with a projection to fit the operator's finger.

Building up the Head

Smear the completed plasticine head with vaseline, and cover it completely by overlapping torn pieces of wet tissue paper. These may be fairly large over the skull and other smooth surfaces, but need to be smaller where they are pressed carefully into and around the features. Next, a layer of Alabastine and bandage is similarly applied, the bandage, previously cut into suitable lengths, being dipped into and well mixed with a plaster paste containing

Completing the Head

Powder or poster colours are quite suitable for painting the head. Paint boldly and exaggerate—avoid realism. Hair may be glued on, and may consist of wool, flannel, fur, raffia or other oddments, according to character.

Alternative Method for Older Pupils

Older Primary pupils may make larger heads, using a pound of Plasticine for the basic shape,

and these heads, if they are to be sufficiently light and durable, are best made from paper. This method usually produces a better finish than the previous one. Having applied the

FIG. 4
Removing the Plasticine

initial layer of tissue paper over the vaseline, stick on small pieces of torn-up newspaper with brush and paste, so that they overlap, carefully shaping the pieces around the features with the brush. Larger pieces may be used for the back of head and neck. When the complete layer is dry, repeat with about six layers in all, finally cutting open, as before, to remove the Plasticine and rejoining with paper and paste.

Hands

These are effectively and simply made from flesh-coloured felt. Cut a double thickness of
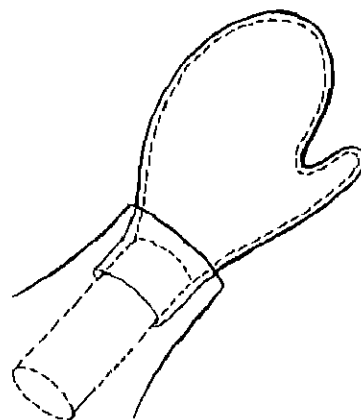
FIG. 5
Making the Hands

felt to shape, and sew around the edges. The size of the hands is best exaggerated out of proportion to the size of the head. The wrist opening should fit the operator's finger, or, better still, a cardboard tube should be glued in to fit it. Sew the hands to the sleeves of the undergarment.

DRESSING THE PUPPETS

Here we must aim at broad effects, but there is much scope for individual work and artistic design.

The Undergarment

This is made of soft material such as cotton, cheese cloth, or odd pieces of material such as that formerly used for blackout purposes Shaped similarly to a nightgown, about nine inches long and four inches wide, it should be long enough to conceal the arm of the operator and full enough to allow free movement for his fingers Its size and shape should allow the pupil to move the puppet's arms and head freely, this can be ensured by laying his extended hand

on a sheet of paper when designing the pattern. Sew a small ring to the back of the bottom hem, by which to hang up the puppet when it is not in use.

Costuming

The undergarment alone can be used, with a few coloured felt or other trimmings, as the complete costume Otherwise the outer garments are fitted over it Simple costumes are the most effective, and intricate elaboration is lost on the audience, aim for general effect rather than detail. Legs, sometimes attached to hang down in front of the undergarment, are of little value and best avoided with Primary pupils

STAGES

Simple Improvised Stages

When first beginning puppetry, a stage is unnecessary, and the puppets may be operated so that the heads and bodies appear over the back edge of a desk or table top, with the children kneeling or seated behind. A string or wire stretched across part of the room, with a curtain

pupils, a box with bottom and lid removed, resting on its side on a small table top, may be improvised. Simple effective properties may then be used, but stage curtains are unnecessary. A sheet of hessian, hung as a backcloth, will hide the puppeteers from view, and still enable them to see the audience through it. Its distance behind the back of the stage should be

Fig. 6
The Undergarment

Fig 7
A Simple Stage

such as to enable easy manipulation of the puppets in front of it, and its length such that it is not in the way of the puppeteers' arms. This backcloth is also useful for attaching scenery, painted scenes or cut-outs can be pinned to it.

A Better Stage for Older Juniors

Older Primary Pupils insist on a "real" stage, and they are quite capable of making one. The following suggestions give a general idea of the framework, but they may be adapted to suit the materials at hand, using scrap timber. Unless expert assistance is available, in which case a folding portable stage is the best proposition, the timber may be nailed together. The

suspended from it, will form an effective screen, with the performers operating the puppet to appear above the top edge. A spare window frame, with curtains extended from the outer edges of the frame to screen the performers, makes a useful stage opening. Alternatively a doorway leading, say, from a cupboard or adjoining room may be used, if, when it is curtained off, the height from the floor permits easy operation of the puppets above the wire supporting the curtain. For the youngest

four corner uprights can be of timber $1\frac{1}{2}$ in. by 1 in as shown in Fig. 8 or two thinner pieces can be nailed together for rigidity Cross stays, say $1\frac{1}{4}$ in. × $\frac{1}{4}$ in make the framework rigid One horizontal crosspiece supports the playboard, which could project a short distance in front of the stage opening, and for which 2 ft. 6 in. × 6 in. is a satisfactory size. A crosspiece at a convenient distance below this may support a shelf for puppets and properties. Cup hooks are useful for hanging the puppets. The height of the playboard should be either just above the pupils heads or, if it is desired that the puppeteers should see the audience and the stage whilst performing, at such a height that they can do this whilst standing. In the latter case, the backcloth should be of hessian, or other suitable material, as mentioned before, but in the former it could be of any material, preferable of neutral colour, which will not detract from the performance. The backcloth, and any cut-out scenery used in front of it, is suspended from wooden battens fixed across the top of the stage Curtains may be suspended from an expandible curtain wire, which is stretched between two hooks, behind the batten forming the top of the theatre opening. A suitable height for this opening, with a 2 ft 6 in. playboard, is 1 ft. 3in. Stage lighting is not a necessity, but a lead may be run from an adjacent electric light socket. A shaped piece of cardboard or plywood, nailed to the top of the front of the theatre opening, gives a pleasant decorative effect. Curtains

tacked to the outside of the stage framework cover all except the theatre opening and, if
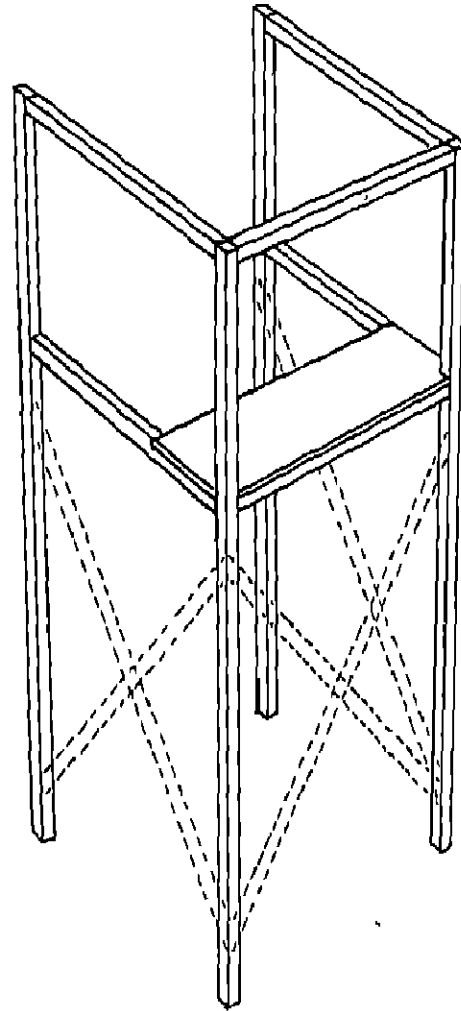
FIG. 8
A Stage for Older Juniors

black, do not divert attention from the performance.

MUSEUMS AND EDUCATIONAL PROJECTS

A MUSEUM is a building in which a collection of objects of historical, scientific, or artistic significance is displayed. These exhibits may comprise the inanimate collections posterity. Private individuals and local societies have, in very many cases, provided the means by which this could be done, and the greater number of our museums have been instituted

FIG. I

Museum Schools Service Material

(By courtesy of the Derbyshire Education Authority)

of museums and Art Galleries, or living creatures and plants as seen in aquaria and in zoological and botanical gardens At the present time there are about 600 museums in the British Isles.

The primary function of a museum is to preserve and display its exhibits for the education and edification of its visitors, and for

in this way. The Horsfall Museum, Manchester, was started in 1877 by Mr T. C. Horsfall as an educational adventure in a poor neighbourhood, and in 1888 Sir Jonathan Hutchinson, F R.S., founded the Haslemere Educational Museum at his home (from which it was moved in 1925). The Haworth Art Gallery, Accrington, Lancs., opened in 1921, was formerly the residence of

Miss Anne Haworth, who endowed it. Similarly Dr. J. L. Kirk of Pickering collected "bygones" to illustrate the everyday household life of the past This collection was presented to the Corporation and housed in the old Female Prison of York Castle It was opened to the public in 1938 as the York Castle Museum.

The Carmarthen County Museum was founded in 1905 by the Carmarthenshire Antiquarian Society Some museums of this kind are still administered by their parent societies, although open to the public The majority, however, are now in the hands of the local Corporation, owing to the costs of upkeep. Somerset County Museum, for example, is now supported by subscriptions from the members of the Archaeological and Natural History Society augmented by a grant from the County Council. It originated, however, in the collections started by the local Society in 1849 These were subsequently removed to Taunton Castle, which was purchased through voluntary subscriptions in 1874 In another region public subscriptions from generous individuals purchased the Sadler Collection, which formed the nucleus of the Gunnersbury Park Museum, Acton, this was opened in 1929.

The private acquisitions of wealthy families have contributed substantially to the splendid collections of the national and university museums. The British Museum, Bloomsbury, holds the manuscripts and historical records collected by Sir Robert Cotton, who lived from 1571–1631 Elias Ashmole, in 1683, presented to the University of Oxford the collection begun earlier in the century by John Tradescant, thus founding the Ashmolean Museum. The Fitzwilliam Museum, Cambridge, contains the collection of the seventh Viscount Fitzwilliam, bequeathed in 1816 with the provision of £100,000 for a building to house it.

The museums of Britain, with their diverse origins, may be classified according to the bodies responsible for their upkeep Costs of upkeep are considerable, varying with the size of the building and collections and the number of staff employed. The estimate of the expenses incurred by the Victoria and Albert Museum, South Kensington, in the year 1947-8 was £178,000. On the other hand, the average town

museum may spend £1000 to £2000 p.a., and the tiny country museum as little as £100. Expenses include the salaries of the staff, those holding administrative posts, the technical assistants, attendants, cleaners, and caretakers. In addition there are the upkeep of the building, the care and repair of the collections, and the purchase of new exhibits.

National museums, such as the British Museum, Bloomsbury, the British Museum (Natural History), South Kensington, and others, are supported by a grant from the Civil Estimates. The administration of the National Gallery, a museum of pictures, is paid for by a Treasury grant, and new pictures are purchased from invested Trust Funds. The Royal Scottish Museum, Edinburgh, likewise receives a Government grant, and the National Museum of Wales, Cardiff, in addition to a grant from the Treasury, receives a rate from the Cardiff City Council.

Historic buildings, that are used as museums, may be supported by a Treasury grant. One of these is Carisbrooke Castle, in the Isle of Wight, which is administered by the Ministry of Works. Another is the thirteenth century Abbott's House Museum, Arbroath Abbey, Angus, which is administered by the Office of Works, Edinburgh.

While taxes thus provide for the upkeep of the nation's heritage in national museums, public money supports small museums also through the rates. Among these are the County Museums, such as the Dorset County Museum, Dorchester, and City Museums, for example, the City Museum and Art Gallery, Leicester.

At Bristol the City Museum and the City Art Gallery are separate buildings. Often when museums are supported by the rates they are housed under the same roof. Many museums are housed in Public Libraries. Often, in these circumstances, the Director of the Art Gallery, or the Librarian, is responsible for the administration of the museum in addition to that of his own department. At Abingdon, Berks, the museum consists of one room in the County Hall. This is open between the months of April and September from 2–4 p.m. It is administered by the Librarian and by the Borough Library Staff.

Unfortunately such arrangements have often

led to the suppression of the museum and the crowding together of its exhibits to make room for the expansion of the other departments. A museum of this kind may have only a small collection, but it is valuable for use by schools and could be expanded by loan and purchase. The only solution of this problem is for sufficient public interest in the museum to be aroused and pressure exerted to secure the appointment

is in most cases reduced for school parties. Among these buildings is the Burns Cottage and Museum, Alloway, Ayrshire, where the poet was born. It is administered by the Burns Monument Trust, and is fitted out with furniture of the period. The entrance fee is 6d. The same charge is made for viewing the cottage at Chalfont St. Giles, Bucks., where Milton lived from 1665–6. This is administered by the Milton Cottage
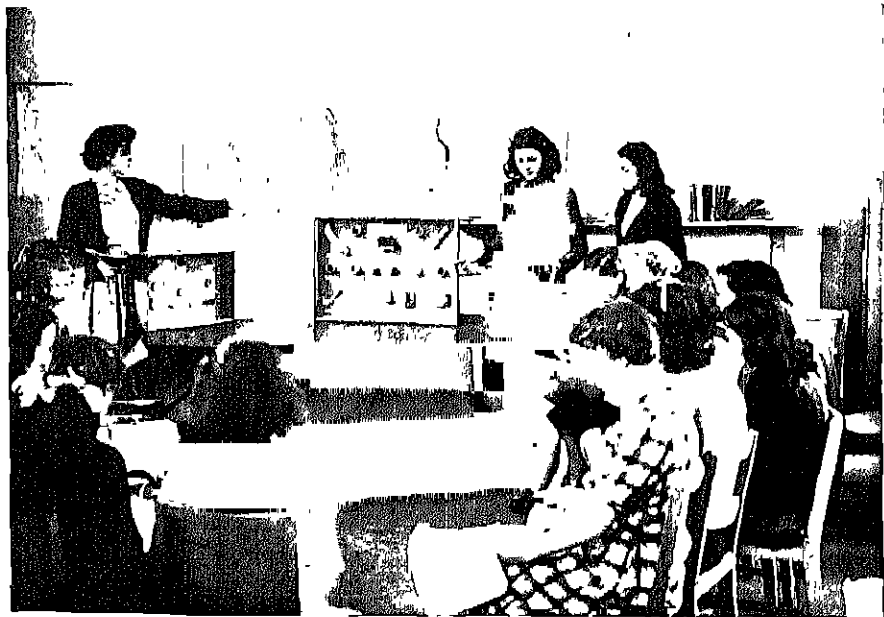
Fig. 2
A Discussion Group using Museum Material
(By courtesy of the Derbyshire Education Authority)

of a separate officer. This officer, who should be trained in the care and display of exhibits, would be responsible for furthering the educational purposes of the museum.

Corporations may also be responsible for the upkeep of museums housed in buildings of historic interest. Among these is the Roman Baths Museum, Bath, which is administered by a committee of the City Council.

Many historic buildings, including the homes of famous literary figures, are supported by private Trusts, and receive no allowance from rates and taxes. The administrators may, therefore, be obliged to charge an admission fee. This

Trustees. Other famous homes include the Dove Cottage and Wordsworth Museum, Grasmere (admission 10d.) which is administered by Trustees with a local committee of management; and the Brontë Parsonage Museum, Haworth, Yorks. Here personal relics of the Brontes may be seen, with manuscripts and furniture (admission 6d.) It is administered by the Brontë Society.

The Educational Museum, Haslemere, is also administered by Trustees with a committee of management. It is, in addition, supported by public subscriptions and endowments, besides the admission fees. These are 3d. for adults and

2d. for children (1d. on Sundays) The unique museum at Bramber, Sussex, is also unsupported by rates and taxes; admission fees of 3d for adults and 2d. for children are therefore charged. This museum is largely made up of scenes from fairy-tales, and nursery rhymes, illustrated by models and stuffed animals. It was started by Mr. Potter of Bramber in 1850, when he was 15.

Certain museums exist which may be visited by the public by special arrangement only These are private collections, such as that belonging to the Duke of Northumberland. This is displayed in two towers of Alnwick Castle, and may be viewed by applying to the Estates Office

Another group of museums are those maintained by Universities. They are used for teaching by the various faculties, and most of them are open to the public. At Cambridge there are, for instance, the Sedgwick Museum of Geology, the University Museum of Archaeology and Ethnology, and the University Museum of Classical Archaeology. The same conditions apply at smaller Universities, such as Bangor, where the Museum of Welsh Antiquities at the University College of North Wales is supported by University funds and may be visited by the public.

Several of the larger schools have their own museum or art gallery. The Ruskin Gallery at Bembridge School, Isle of Wight, contains pictures painted by Ruskin and by painters associated with him In the summer term boys' art work is also exhibited. It is open to visitors, and application should be made previously to the Warden of the School

The Libraries of Cathedrals may include a museum. At Durham the Cathedral Library and Museum is open to visitors (admission 6d.) Its collection includes Roman altars, Anglo-Saxon crosses, relics of St. Cuthbert, and early manuscripts of the seventh to the fifteenth centuries The museum is maintained by a grant made by the Dean and Chapter from Capitular Revenues

Finally, certain regiments may gather items of historical interest into a museum. That of the Gloucestershire Regiment, Reservoir Camp, consists of regimental relics covering the history of each battalion. Visits may be made to museums of this kind by application to the Officer i/c museum, at the appropriate Regimental Headquarters

Museum Activities

In recent years the conception of the function of a museum has been undergoing a revolutionary change Museum authorities are conscious of their responsibility to interest the public in the treasures that public money secures and maintains. Also, instead of being the mere repositories of relics of the past, museums are becoming centres of local interest and social activities. Art galleries, too, frequently hold special temporary exhibitions of pictures, or exhibit paintings on loan from other galleries. Room may also be found for an exhibition of the work of local artists. Museums have always provided facilities for research. Now many of them provide lectures concerning their exhibits, often in the evening so that they will attract a larger audience. Lectures are given to the general public, W.E.A. groups, students from Training Colleges, youth groups, and Women's Institutes.

Under the auspices of Horsham Museum, Surrey, visits are organized to other museums and places of archaeological interest. In addition to lecturing, and taking school parties round the museum, the Curator contributes a monthly article to the local paper. Film-shows, too, may be given as part of a museum's activities. During the winter weekly programmes of films are shown at the Corporation Natural History Museum, Ipswich These deal with natural history, travel, and other educational subjects.

All museums publish guides and handbooks. Some, in addition, issue a form of news-sheet, such as the bi-monthly calendar of events of the Art Gallery and Museum, Glasgow This approach encourages a public interest in museums, which is fostered by such organizations as the Glasgow Art Galleries and Museum Association This was founded in 1944, to bring the public into closer contact with museum activities. That these activities may have a wide scope is shown by the societies using the Reading Museum and Art Gallery as their headquarters. Reading and District Natural History Society;

Reading Camera Club; Reading Film Society; Reading Guild of Artists, and Reading Microscopical Society.

Leisure Activities for Children

Directors of museums and their staffs are able to exchange ideas about the development of

said in 1949. "Every National Museum should have a Children's Gallery designed and furnished so that the exhibition material is not in any sense above the users' heads." This has actually been done at the Science Museum, South Kensington, where working models specially designed for children are installed. These illustrate such things as X-rays, the rainbow, the
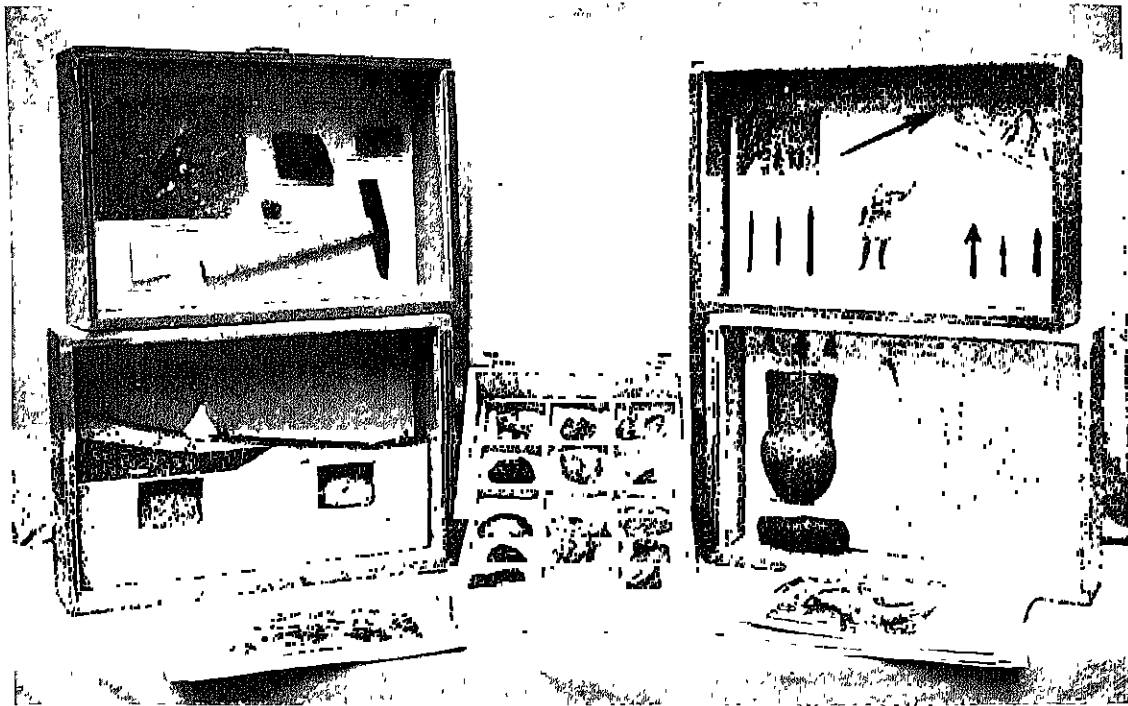
Fig. 3

Museum Schools Service Material

(By courtesy of the National Museum of Wales)

new activities through the Museums Association. This Association issues a monthly Museums Journal and holds conferences to discuss current museum affairs and techniques. A special branch has recently been organized to promote leisure-time activities for children in museums and to provide opportunities for discussion between those who are already active in this field.

It is recognized as ideal that exhibits in a certain part of a museum should be arranged, preferably with working models, expecially for children. As the Director of the British Museum

value of the pulley, and how a telephone works.

Other museums, however, arrange special activities through which children can learn to appreciate exhibits arranged for adults. These may be supervised by a member of the museum staff or by a teacher seconded to the museum. In many museums a room is set aside for a Children's Centre. There objects from the museum reserve collection are available for children to study and draw. Books also may be provided, as at the British Museum (Natural History), South Kensington, to enable children to read about the

exhibits for themselves. Paper, pencils, crayons, paints, and Plasticine are in many cases provided for children, and stools and drawing boards may be available so that they can sit and draw in the museum itself.

The most outstanding work in this field has been achieved at the Geffrye Museum, Shoreditch. These eighteenth century almshouses were opened to the public as a furniture museum by the London County Council in 1914. It was in 1935 that educational activities were initiated there under Mrs. Quennell, who re-arranged the exhibits to form a series of period rooms from 1600 to the present day. The voluntary use of the museum on a large scale by children was encouraged during the war, when the Curator, Mrs. Harrison, developed schemes to help children to acquire a real interest in the historical background of the exhibits. Duplicated sheets are now handed out to children. These may describe homes and life in certain periods and spaces are left for the child to fill in with his own observations and drawings. The information required is to be found by examining the exhibits and explanatory charts in the relevant room. In addition to these activities, children are encouraged to model and paint freely in a studio. Craft classes have also been held in pottery, weaving, and wood-carving.

Many other museums organize activities for children on Saturdays and during the school holidays. Among the difficulties that confront the organizers is the problem of providing for the large number of children who wish to participate, for in most cases staff and space are very limited at present. Some method of selection may have to be enforced, ranging from an entrance test of some kind to the restriction of attendance of certain age-groups to fixed times. Also, where only one room is available, as at the Horniman Museum, Forest Hill, it is difficult to create the right working conditions for the intelligent child, while providing less intellectual activities to arouse the interest of those who are less studious but more vociferous. The British Museum (Natural History) has overcome this difficulty by providing two separate rooms. One is used as a Children's Centre, where printed sheets with simple headings encourage a child to draw in the museum and teach him the first

elements of the observation of birds and beasts. Children between the ages of 7 and 15 years can handle specimens and read information leaflets there. On the other hand, children who wish to pursue serious studies must prove this by showing a piece of field-work, such as a note-book of their observations over a period of time. They may then, if numbers allow, join the Junior Naturalists' Club. This meets in a special club-room, where children are able to work on their own collections with expert guidance. They learn how to identify and mount specimens, sometimes with the assistance of specialists from other Departments in the museum. A magazine, "Field Observer," is edited by the children, and the Club also arranges excursions. Fossils and other biological and botanical specimens may be collected, and subsequently identified and mounted at the museum. Similarly, walks for this purpose are conducted from the museum at Norwich.

Saturday morning classes for children of all ages have been organized at the Glasgow Art Gallery and Museum. The numbers are restricted so that each child can receive adequate attention and have sufficient space to work. When the Art Class was initiated in 1946 fifty-two children between the ages of 5 and 12 years were enrolled. The work of this class consists mainly of painting, but from time to time talks are given on pictures in the Art Gallery collection. Meetings last two hours. The Puppetry Class, which is limited to thirty members, meets for one and a half hours. The members are shown how to make puppets, with the aim of organizing their own performances at the Art Gallery Puppetry Theatre. The Young Naturalists' Class is taken by visiting lecturers and meets fortnightly for two hours. Membership is limited to thirty. Children learn how to observe British animal life and are given notebooks for their drawings and observations. Weekly film shows are also given for children who are unable to join the classes. These show films on living creatures, other lands, and sport.

Children's interest in a museum will be stimulated by a class visit. Further visits through the activities of a Children's Centre will help to foster that interest and aid the acquisition of learning. At the museum children may

find quiet for reading and space for working that they cannot have at home. They can, in addition, pursue one particular interest in a way that is impossible in the classroom. It has been found, also, that knowledge acquired at school takes on a new significance when it can actually be used in an exciting activity. In short, the close contact with specimens provides a vital element of discovery and stimulates even the backward child.

Museum Collections

The use of a museum by a teacher will be conditioned by the scope of its collection. Museums may broadly be divided into two categories—those whose material is specialized, and those whose collection includes objects of very different types. The Victoria and Albert Museum, South Kensington, may be cited as an example of the first group. It is a museum of fine and applied art, and its material is grouped into the following departments: Architecture and Sculpture, Ceramics; Engraving, Illustration and Design, Library and Book Production,
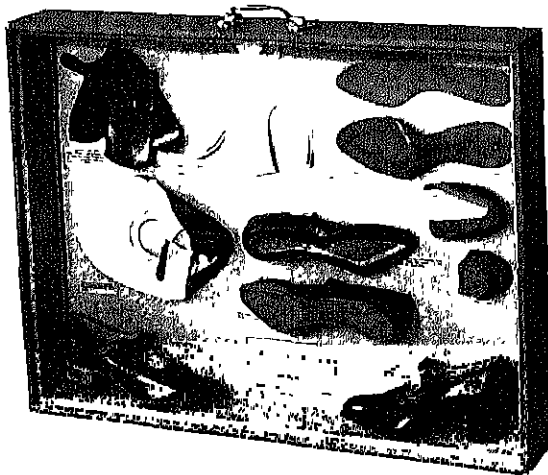

FIG. 4
*A case which shows the Stages in the
Manufacture of Shoes*
(By courtesy of The Museums and Art Gallery, Leicester)

Metalwork, Paintings, Textiles, Woodwork, and an Indian Section. The British Museum, Bloomsbury, specializes in history, archaeology,

and art, and its departments include: Prints and Drawings, Coins and Medals; Egyptian and Assyrian Antiquities, Greek and Roman Antiquities; British and Medieval Antiquities; Oriental Antiquities, and Ethnography. The Science Museum, South Kensington, on the other hand, illustrates the application of science to industry and the development of scientific and industrial instruments, apparatus, and machinery, and has five departments. A smaller example of the specialized group is Sir John Soane's Museum and Library, Lincoln's Inn Fields. This house, built in 1812, preserves the character of the private residence of an architect and collector of the early nineteenth century. Its collection is therefore limited.

Only comparatively few schools are able to make regular visits to the great London museums. It is the often heterogeneous collections of local museums with which most teachers are concerned for illustration of their class-work. In the smaller museum exhibits may broadly comprise natural history collections presented by local naturalists, ethnographical specimens and miscellaneous antiquities brought back from abroad by local residents, prehistoric flints, pottery, and metal objects excavated in the district; and "bygones" consisting of antique costume, household objects, furniture, playthings, farm implements, disused vehicles, etc. There may be in addition old maps and documents relating to local history.

This type of collection is well illustrated by the Corporation Museum and Art Gallery, Newport, Mon. The five galleries contain (1) the Laybourne Collection of British Birds; (2) a type survey of the Animal Kingdom; (3) Oil-paintings, sculpture and ceramics, (4) Drawings; archaeological material from Caerleon and Caerwent; collections of archaeological, mineralogical, and palaeontological material, with local bygones, local Chartist documents, and Pontypool and Usk japan-ware; (5) The "Fred Richards" Print Gallery. At Kettering, Northants, the museum is housed in the same building as the Public Library. In a single room are displayed zoological and geological specimens and a botanical collection together with archaeological objects of Roman and Saxon date. At Guildford the museum's inadequate natural history section was withdrawn in 1948 to make room for the

best possible display of its remaining material This includes a large number of local archaeological finds. These are of the Stone and Bronze Ages, as well as Roman and Saxon remains. Other exhibits include domestic ironware, cottage implements, spinning wheels, lighting devices, textiles, and needlework and prints.

Such miscellaneous collections are not related to any scheme of display, as is to be found in a specialized institution such as the Victoria and Albert Museum Yet the discerning teacher will be able to apply different sections, or at least certain exhibits, for stimulating illustration of lessons and projects. The fish, birds, birds' eggs, insects, and botanical exhibits will be of use in nature study, where the country is too far off for actual specimens to be seen or obtained for the classroom. Moreover, museum exhibits will aid country pupils in the identification of birds, etc , seen in the course of field observation. The spears, costumes, and other objects brought home from abroad will, if not mere "souvenirs," help to create a conception of life in a certain country to children studying geography. Recent history and local studies will be aided by the perusal of documents, maps, and bygones. Study of earlier times will be given a new significance by the introduction to children of actual flints and pottery made by earlier inhabitants of their own neighbourhood. The Barbican House Museum, Lewes, provides an interesting series of hand-mills, or querns. From these children can see how prehistoric women laboriously ground corn into flour between two stones, a development of historical, social, and agricultural significance.

Museums Schools Services

Many museums are running, or developing, a Schools Service. This may comprise special facilities for teachers wishing to bring children to the museum, and, in addition, a Loan Scheme for bringing the museum to the children. At the British Museum (Natural History) only the first of these has, so far, been developed Parties of not more than twenty-five children may be brought to the Children's Centre in school time to study such subjects as British mammals and birds, the simple classification of vertebrates, and fossils Preparation for school journeys and

camps is also given. A school visit to the museum allows children to draw and make notes about specimens placed in front of them for handling Outside the Centre the group then visits the exhibits in the museum. Visits may be arranged for Tuesdays, Wednesdays, Thursdays, and Fridays in term time. Enquiries and appointments should be made between 4 and 5 p.m. A fortnight's notice is desirable for each visit. Teachers are advised to discuss the subject of the visit in advance with one of the museum teachers, so that it may be fully integrated with school work

At the Geffrye Museum, Shoreditch, stress is placed on the children's interest being aroused through "finding-out" activities. In time children become eager to acquire further information on the subject and ask for a talk from the museum teacher. For this approach, courses of study are encouraged rather than single exploratory visits Using the series of period rooms with their accompanying charts, children make booklets·on such subjects as "The Story of English Life," "The English Child at Home," and "Design in the Home." Here, as in other museums, the practical activities allow each child to absorb information at his own speed. This is in direct contrast to the old guided tour of the museum, where the child played an entirely passive part in the visit

The Horniman Museum, Forest Hill, like the Geffrye Museum, is administered by the London County Council The museum exhibits are arranged in comparative, not geographical series. Sections on Puppets, Transport, etc., on the ethnological side, and those dealing with Animal Movement, Animal Defence, etc., in natural history provide some of the many subjects for school visits. Primary schools make special use of the courses available on transport by land and sea, and early history, as well as those on nature study including the aquarium. Duplicate exhibits and models may be handled and drawn in the Children's Centre. This is followed by the answering of a question paper in the appropriate section of the museum As well as visits in connection with lessons and projects, the museum offers facilities for illustrating the B.B.C. Broadcasts to Schools, especially Nature Study and How Things Began.

The handling of specimens, fossils, flints, and bronze tools is especially valuable in the latter case.

A Museum Schools Service was initiated at the National Museum of Wales, Cardiff, with the appointment of two Schools Service Officers in 1949. Officers have now been attached to the
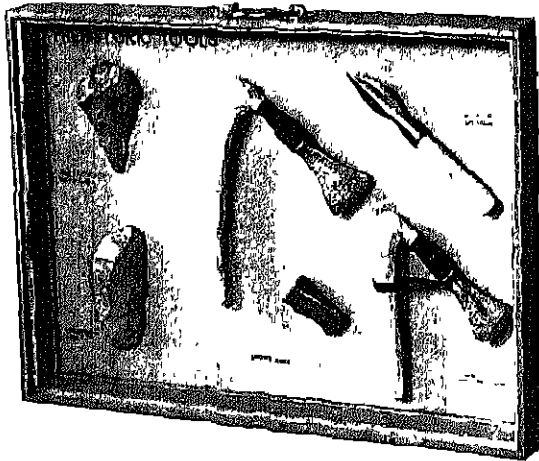

Fig. 5
Museum Schools Service Material
(By courtesy of The Museums and Art Gallery, Leicester)

museum departments of Archaeology, Art, Botany, and Geology, and appointments are being made to the department of Zoology and to the Folk Museum. The Service is controlled by a committee, whose functions are to control policy, finance, and higher appointments. Eight members are appointed by the Museum Council, and thirteen by educational bodies. Four represent the teaching profession, one member each being nominated by the National Union of Teachers, the "Joint Four," and the Welsh Secondary Schools Association, with the addition of a representative of the University extra-mural staffs. The Committee includes also one member from a University training department, another from the Training Colleges, and an assessor from the Welsh Department of the Ministry of Education. An Executive Sub-committee is concerned with the detailed running of the Service. It meets more frequently than the parent Committee, and is composed of fourteen

members. Seven of these are appointed by the Museum Council, and seven by the Schools Service Committee. The whole Service is financed by Local Education Authorities, each of which contributes according to the numbers of children in its secondary schools.

The Schools Service, which is at present confined to secondary schools, operates both inside and outside the museum. Only schools in Glamorgan and Monmouthshire are able to make regular use of the intra-mural services. These consist of demonstrations of museum material, which may be handled, in a Centre at the museum. This may be followed by the showing of lantern slides and film-strips and a guided visit to see the museum galleries. The Schools Service Officers are, however, largely occupied in extra-mural work. Their duties include visits to schools to lecture about museum material on loan there. This material consists mainly of small exhibits in glass-fronted cases, easily portable, but some objects may be packed separately for handling in class. Photographs are used to illustrate buildings and prehistoric monuments of stone, until models of these have been constructed. This loan material, which is circulated to schools by van, comprises geological and archaeological specimens. Geology is taught separately in very few schools, and the introductory section of this material is intended to arouse children's interest. It includes the "Stories in Stone" series, one case of which shows traces of the Ice Age in Wales, while another illustrates a beginner's equipment and some of the finds he might make. Other sections cover minerals and rocks, fossils, physical geology, historical geology (the story of the world and living creatures) and economic geology. The archaeological collection provides background for the study of man's cultural progress from the earliest times to the Middle Ages. The exhibition cases show tools and household articles of various periods and reconstructions of sites where people lived long ago. A Roman hypocaust heating system is illustrated by a model, and examples and models show the types of tiles used in Welsh medieval abbeys. These collections are supplemented by a large number of lantern slides and illustrations which may also be borrowed.

The Lending Section of the Glasgow Museum

Service is still developing. A certain number of birds, birds' nests, animals, insects, and geological specimens may be borrowed. Several plaster models are also available, ranging from Stonehenge to a Hebridean "black" house. The Art Gallery collection of 4,000 lantern slides deals with British and European schools of painting, and has sections covering crafts, technology, travel, and history. Slides are supplied to schools on request. In addition, a library is being assembled of prints and post-card reproductions of modern paintings and objects in the British Museum and the Victoria and Albert Museum.

The intra-mural facilities for schools at the Glasgow Museum and Art Gallery have been developing since 1941. In 1947, 36,828 school-children attended lessons given at the museum, and by 1948 this number had increased to 46,234. These lessons, which last an hour, may be single, or form part of a weekly course, and they are given in the museum classroom. In addition to a large syllabus for secondary schools, some lessons are specially designed for primary schools. These include, in Art, "The Artist's Paint Box," "Many Ways of Picture Making," and "The Life of Christ told by Artists." History lessons include "The Development of Road and Rail Transport," "Ships from Sail to Steam," "Armour of the Middle Ages," and "Dress and Habits of Bygone Days." Geography lessons illustrate the life of the people and animals of Australia, and Science lessons cover paraffin oil, the formation of coal, building stones, and "The Romance of the Rocks." Nature Study lessons deal with British animal life, and "Design in Nature." In addition, talks on trees are given to schools at Tollcross Museum, at which each child receives a leaflet showing the leaves of different trees that are to be seen in the City Parks.

A very comprehensive Museum Service operates in Derbyshire. Material sent to schools on loan includes specimens that may be handled in class as well as others in small glass cases. Some exhibition cases contain delicate objects, such as butterflies and moths, arranged for comparison. Biological material preserved in fluid is also available to schools. Accurate replicas are used where original material is scarce or precious. This applies particularly in the case of ancient pottery. Scale models are available of objects illustrating transport, architecture, and physical geography, and costumes are shown by means of small dressed dolls. Scale models sufficiently enlarged are valuable for teaching about objects not normally visible to unaided eyes, for example, bacteria. Other material available to schools includes specialized maps, charts, and diagrams, reproductions of paintings (twelth century to present day), illustrations and postcards for use with epidiascopes, film-strips, sound and silent films, and gramophone records. The records include country and folk dance tunes, foreign languages, English literature readings, voices of birds and beasts, and sounds for use in amateur dramatics.

At the end of every term a notification card is sent to each school. This gives the date of the next term's distributions, and the latest date for submitting requests. When the members of the staff have chosen their material from the museum catalogues, application cards are filled in and returned to the museum. The material, specially packed to avoid damage, is delivered by museum van, which makes an average of ten daily journeys at each distribution, covering about 1,000 miles. On receiving the material, each school sends a receipt card to the museum. When the material is collected by van and returned to the museum it is examined for damage or wear. No charge is made to borrowers on this account except in cases of extreme negligence.

This Service began in 1936, aided by a grant from the Carnegie Trust. It was greatly expanded in 1947 when larger premises were acquired. It is administered by a trained Organizer working under the general direction of the Director of Education. There is also an Advisory Committee which reports to the Education Committee. This is composed of three members of the County Education Committee, and representatives of Nottingham University, Derbyshire Association of Teachers, Joint Secondary Schools Association, Rural Community Council, Derby Federation of Women's Institutes, Townswomen's Guild, and the Derbyshire Archaeological Society, with two co-opted members.

At the Museum and Art Gallery, Leicester, school classes are accommodated in a lecture

room capable of seating eighty. It is equipped with a sound and silent film projector, a film-strip projector, and an epidiascope. Talks on the collections are given, the subjects of the visits being pre-arranged Specimens are available for handling in this room, and this is particularly valuable for blind children, parties of whom are frequently received at the museum.

devoted to glassware and pottery. Schools receive these objects packed in boxes with sponge rubber, or mounted in glass-topped cases. Fabrics of different types are mounted in frames or sent out as curtain lengths. These include fabrics woven and printed by hand and by machine. Examples of needlework, wood-work, metalwork, etc., may also be borrowed

Fig. 6
Children's Centre
(By courtesy of The British Museum – Natural History)

Excursions are also made to other buildings of historical interest in the town, and to the branch museums. At the Roman forum, for example, remains of the basilica, bath, and a mosaic pavement are to be seen. The Newarke Houses Museum is a seventeenth century building showing contemporary furniture and pictures. It also contains early domestic articles and agricultural implements, and relics of people of local importance

Part of the loan collection at Leicester is

Studies of Leicester industries in the classroom may be illustrated by cases from the museum. They are included in a series showing the stages in the manufacture of wool yarn, silk, linen, cotton, etc. The homes of foreign peoples are included in a geological and geographical section One case shows an Eskimo family inside their igloo. Another type of case displays a cut-out map The distribution of the natural products of that particular region are shown by actual specimens placed around the map.

Background to history lessons is provided by models of houses and costumes from prehistoric times to the present day. These illustrations of changing customs in architecture and dress are mounted in glass-topped cases. Tools and domestic articles of prehistoric, Roman, and Saxon times are also available. Wherever necessary these are mounted so as to show how they were hafted. A large biology section offers both specimens and models of animal and plant life. A series of physiological models illustrates the structure of some of the organs of the human body. Insects, birds, and animals are mounted in glass-topped cases.

Schools making use of these collections send details of their needs to the museum on special application cards. The required cases are then delivered by van, at present at the beginning of each term. The School Service Department is open during the day to teachers and students for inspection, and then also material may be chosen and taken away.

The Schools Service at the City Museum, Bristol, was revived in 1949 with the appointment of a Schools Organizer, the appointment being made jointly with the Education Committee. A loan collection for schools is in operation, and is constantly being enlarged. One section, illustrating industries and manufacturing processes, offers specimens, charts, photographs, and dioramas. These have special reference to wool, rubber, iron, tobacco, steel, and Irish linen. Another section covers geology, together with the geography of the British Isles, Australia, New Zealand, Africa, the Colonies, North and South America, and France. Illustrations of national costumes and of methods of tea production are also available. History loan cases represent prehistoric man and his tools. Other cases provide background for the study of Egyptian and Roman civilization. A wall picture for loan shows a Roman town in the fourth century, and exhibition cases show "Fragments from a Roman Home," and "Roman Dress Ornament." Architectural developments are shown by models of churches, and illustrations of cathedrals and castles from Saxon times to the Renaissance. Early forms of lighting in the home are shown in a case containing a candle mould, tinder box, early matches, and a rush-

light holder. The Biology and Human Physiology sections include botanical models and illustrations, including British trees, flowers, and weeds. Applied botany is illustrated by a model showing the composition and structure of soil, samples of various fertilizers, models demonstrating tomato blight, and hand specimens of various woods. A number of mounted birds and mammals are available for loan, and also some enlarged zoological models, including the hydra, amoeba, and frog. Models of the ear and heart provide background for human physiology, and charts showing the eye, teeth, circulation of the blood, and the skeleton are also available.

Material is delivered weekly, and the period of loan is either for one week or a fortnight.

A Children's Room at the museum has been specially equipped for school visits. Among the subjects offered to visiting parties are "The Story of the Home," and "Travel and Transport through the Ages." Other topics include "The Beginnings of History" and "Life and Art in Ancient Egypt." In addition, there have been lectures and exhibitions dealing with "The History and Manufacture of Pottery," "Plastics," and "Wool." Special visits have also been arranged to illustrate some particular subject that has been studied by a class.

Very few primary classes have been able to take advantage of these facilities, as priority has been given to secondary schools. The latter have made very heavy demands on the Service, and until further expansion takes place younger children can be fitted in only as time allows.

The Educational Museum, Haslemere, has for many years played a leading part in organizing school visits. A particular interest is given to nature study by the use of a micro-projector. New fields of study are opened as children see revealed the seething creatures existing in a tiny drop of stagnant water. Admiration for Nature's handiwork is aroused by such means as showing a fine needle on the screen beside the infinitely finer "sting" of a stinging nettle. Besides the revelations of the micro-projector, there is also an ever-changing collection of such things as local wild flowers, fungi, winter buds of trees, herbs, and local fauna. Children are encouraged to bring contributions to this. The work of this museum in nature study is the more valuable

since it is visited by parties of town children staying at nearby holiday camp schools. In 1948 five thousand of these children visited the museum, as well as regular visitors from local schools. How well interest in these regular visits is sustained is shown by the statement of a local Headmaster, that "when punishment was necessary in his school, the one most disliked was to be deprived of the weekly visit to the museum."

In conclusion, many museums all over the country provide facilities for teachers of which they may take advantage either at the museum or at school. Where these have not yet been organized, it is only agitation by educational bodies that can bring them into existence. However, their absence should never discourage teachers from making use of the museum for the illustration of lessons and projects. Even though there is no Schools Officer with whom to discuss integration of class work with the exhibits, a careful survey of these by the teacher will suggest the lines on which they may be used. A preparatory visit by the teacher is essential for the smooth running of the subsequent visit. Knowing where the particular exhibits are to be found, the teacher will be able to guide the class straight to them. He will also have had an opportunity to prepare a question paper, or some other piece of work, to be completed by the children, so that their concentration may be centred on the subject of the visit. Also, experience has shown that the children who derive most benefit from visiting the museum are those for whom the visit is an illustration of lessons already given at school. Teachers are advised, when planning visits in connection with a term's work, to use them as a follow-up of lessons rather than as a preparation for them. It is also advisable to write to the Curator of a museum as long before the visit as possible. This ensures that the museum itself, and the particular section to be visited, will be open to the public on the day of the visit. Parts of a museum may have to be closed temporarily

owing to re-arrangement of exhibits. The letter to the Curator should state the date and approximate time of the visit, its subject, and the age and number of children that it is proposed to bring

Where children show themselves capable of using a museum in a quiet and constructive manner, and do not interrupt the work of the museum staff, students, or the public by undisciplined behaviour, it is certain that museum authorities will be most willing to help in the use of their material in the education of the rising generation Only the experienced teacher, however, can fully realize the contribution that the museum can make to the life of the classroom. If teachers will explore local museums and think out their possibilities, they will be in a position to suggest facilities that could be provided by co-operation between the museum and the Local Education Authority.

MUSEUMS OFFERING SPECIAL FACILITIES TO SCHOOLS

City Museum and Art Gallery, Birmingham
City Art Gallery, Bristol
National Museum of Wales, Cardiff
Derby Corporation Art Gallery
Royal Scottish Museum, Edinburgh
Art Gallery and Museum, Glasgow
Educational Museum, Haslemere
Leicester Corporation, Museum and Art Gallery
British Museum (Natural History) London
Bruce Castle Museum, Tottenham
Geffrye Museum, Shoreditch
Horniman Museum, Forest Hill
Imperial Institute, London
Science Museum, London
Victoria and Albert Museum, London
Horsfall Museum, Manchester
University Museum, Manchester
Castle Museum and Art Gallery, Norwich
City of Nottingham Museum and Art Gallery
Reading Corporation Museum and Art Gallery
City Art Gallery, Wakefield
Castle Museum, York